

# MANUFACTURERS' RECORD

A Weekly Southern Industrial and Hardware Newspaper.

VOL. 10. No. 14.  
WEEKLY.

BALTIMORE, NOVEMBER 13, 1886.

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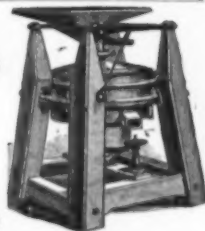
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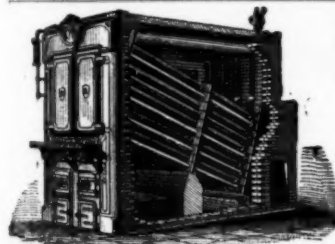
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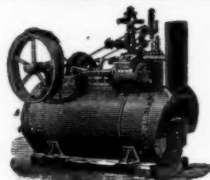
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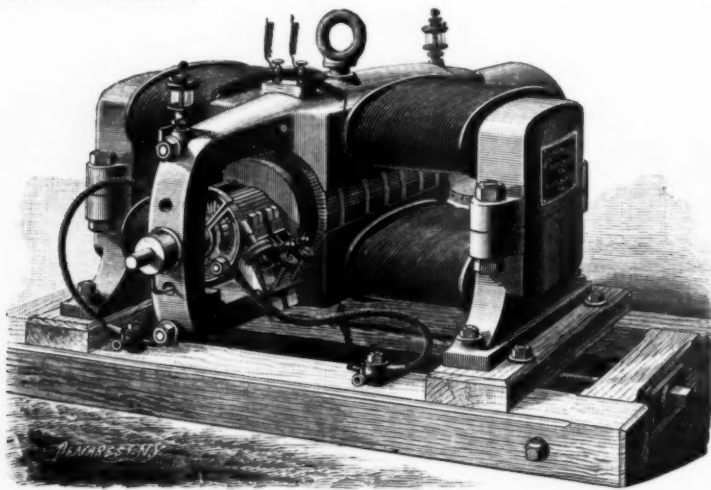
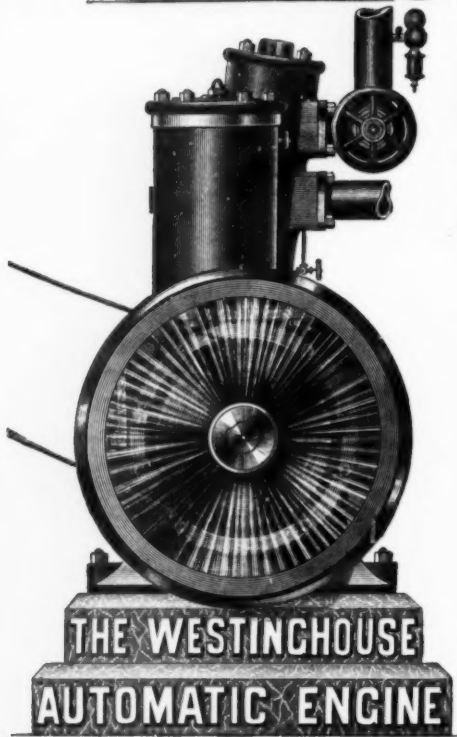
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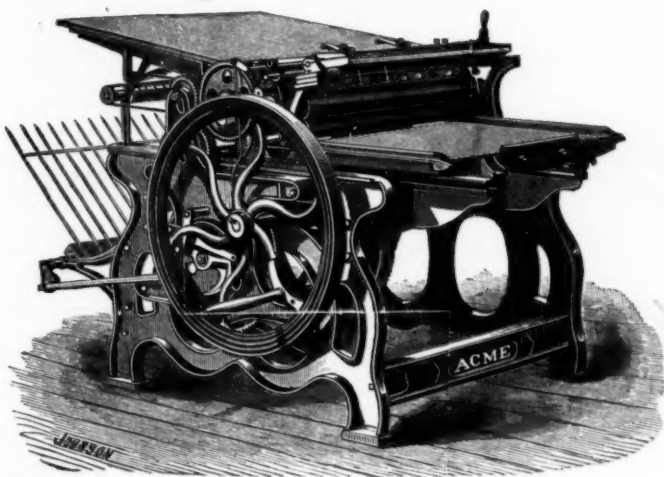
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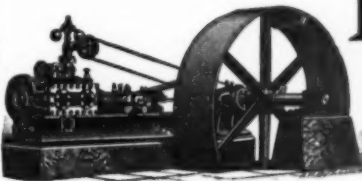
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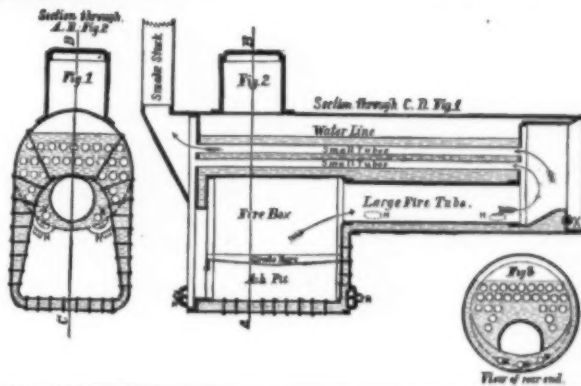
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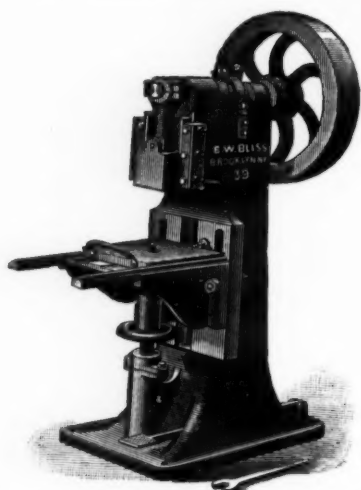
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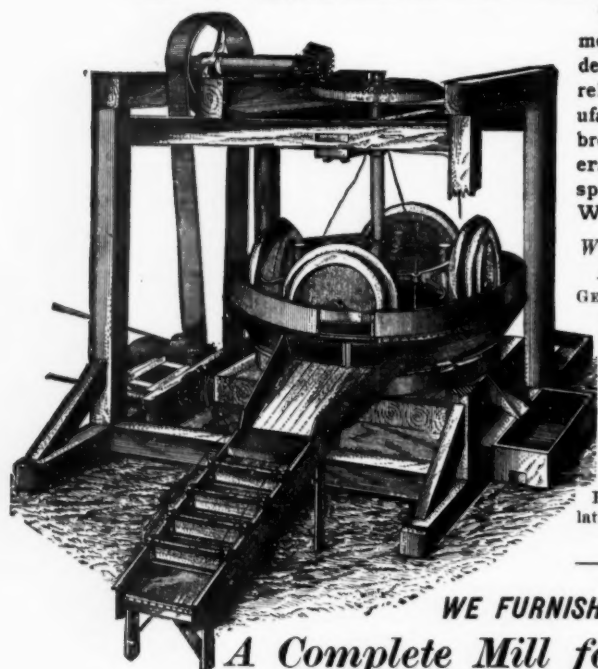
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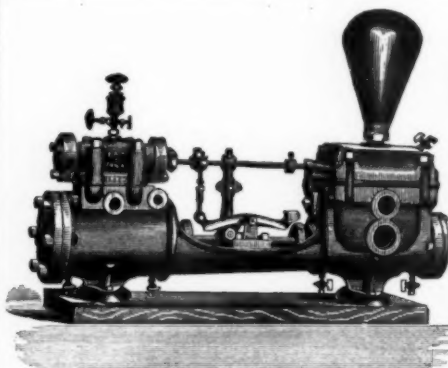
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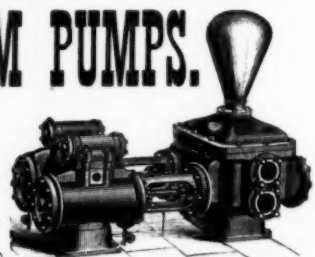
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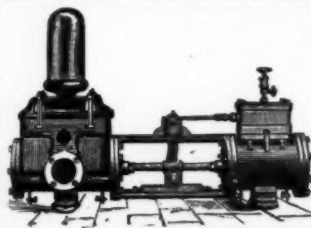
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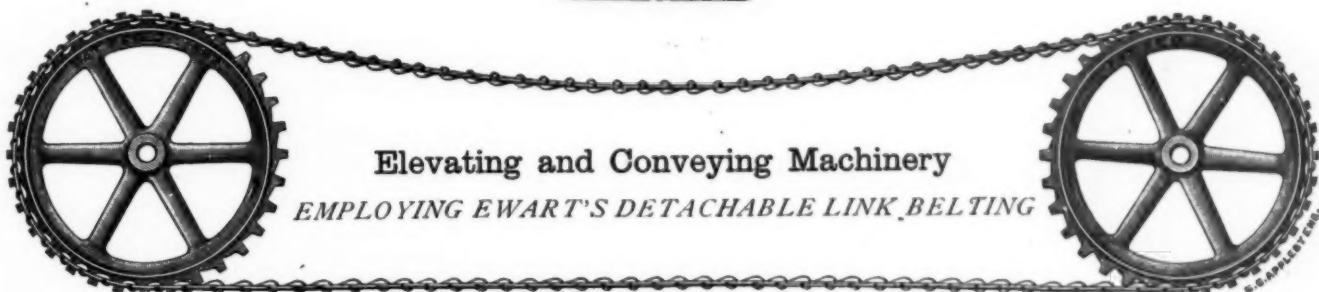
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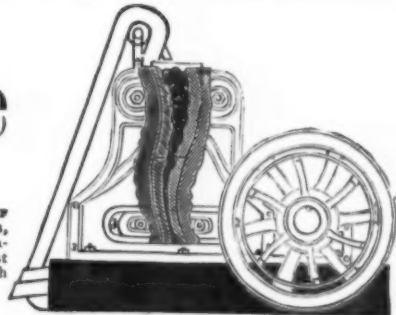
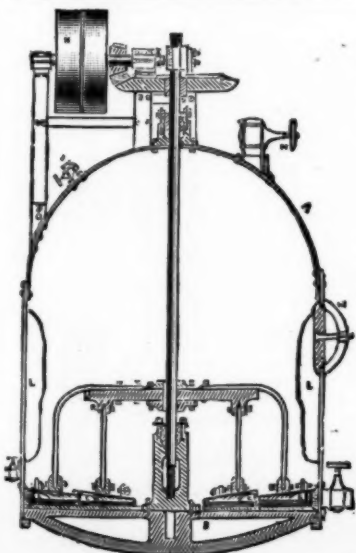
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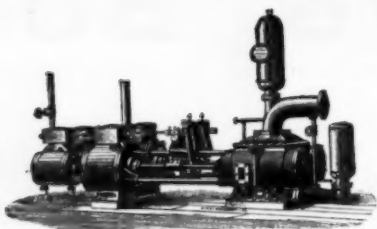
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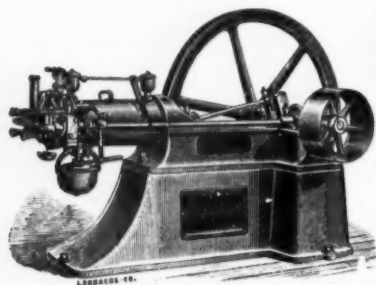
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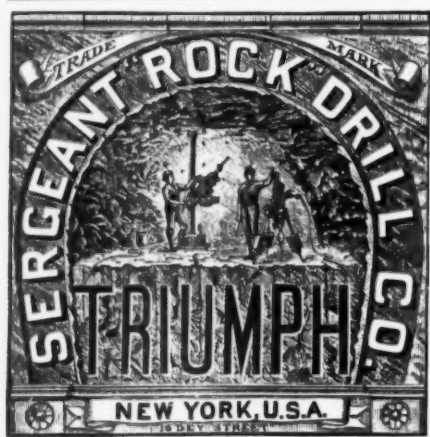
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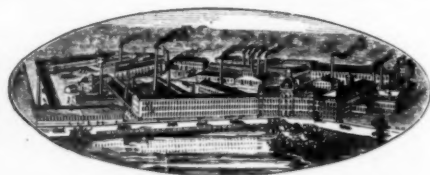
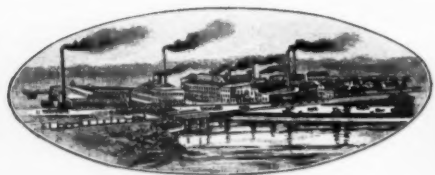
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# BALTIMORE Manufacturers' Record.

PUBLISHED EVERY SATURDAY BY THE  
MANUFACTURERS' RECORD CO.

J. W. BIGSBY, *Pres.*  
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WM. H. EDMONDS, *Secty. & Manager.*

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BALTIMORE, NOVEMBER 13, 1886.

A CORRESPONDENT of the Fayetteville, N. C., Observer falls into an error committed by one or two other papers, and in referring to the speech at Raleigh before the Northern Settlers Convention by our correspondent, Maj. Wm. M. Pegram, says:

"Maj. Pegram is the editor of the Baltimore MANUFACTURERS' RECORD."

It would hardly seem necessary to correct such a statement except for the fact that as it has appeared once or twice before, it might be regarded as authentic. Maj. Pegram is not the editor of the MANUFACTURERS' RECORD, nor has he ever contributed to its editorial columns. As a traveling correspondent during the last five months, he has served the MANUFACTURERS' RECORD with much credit to himself and with entire satisfaction to the editor. He is not, of course, responsible for the mistakes of others in referring to him.

The name of the editor of the MANUFACTURERS' RECORD appears at the head of this column. Since the first issue of this paper he has been the sole editor, and in all human probability will continue in that position for a good long time to come. That the MANUFACTURERS' RECORD under his editorship has been instrumental in accomplishing good for the South, and has won the hearty endorsement of the press and the people of that section, is one of the most gratifying results of the years of hard work in behalf of his native land.

WE are indebted to Mr. Chas. G. Eddy, Vice-President of the Norfolk & Western R. R., Roanoke, Va., for a very fine map of Southwest Virginia and contiguous territory, by C. R. Boyd, C. E., showing its mineral resources and railway facilities, with much other information of value to all interested in that section.

ADVERTISERS wishing to reach the manufacturers of all classes, mining companies, steel, iron and hardware dealers of the entire South, cannot find a better medium than the MANUFACTURERS' RECORD.

## Protection and Development.

The opening of mines, the cutting down of forests, are the forerunners in this era of Southern history of the starting of foundries, furnaces and factories, for the Southern people have learned that, however great may be their wealth of raw materials, it is poor economy to send them to distant places for conversion into articles that they use. A development that stops there is akin to that old time practice, which sent all cotton and tobacco to other markets, and then paid double freights and manufacturer's profits on what could have been made at home. The change for the better in this respect is noted weekly in our news columns. But simultaneously with this change another is quietly going on that last week attracted universal attention all over the land. The elections for Congress proved most conclusively that Southern voters are not unanimously in favor of free trade, as has often been ignorantly asserted, but that very many of them are decidedly opposed to removing the protection feature from the system of collecting duties on imports. The most significant proof of this was the greatly reduced majority of speaker Carlisle, who, notwithstanding his great personal popularity, barely succeeded in pulling through. Mr. Carlisle is a highly educated gentleman, whose personal integrity and ability are alike beyond question. He has shown himself to be one of the most fair and most capable of the many eminent men who have occupied the speaker's chair of the House of Representatives. But, because he believes in and advocates the beautiful but impracticable theories of free trade, he came very near being remanded to private life by a people who admire and respect him as a man. In Virginia and North Carolina the same causes have operated in several Congressional districts to defeat candidates of like faith with speaker Carlisle, and to elect others who believe in the doctrine of protection. These signs of the drift of Southern thought cannot be erased by attributing them to other causes. Whatever the part the organization styled the Knights of Labor may have played in the political campaign, it is true that not only among its members, but among Southern farmers as well, the conviction is steadily gaining strength that the industrial interests of the South need the fostering influences of a protective tariff. Every new manufacturing enterprise in Virginia or Kentucky, or in the States between them and the gulf, is a silent but powerful advocate of the protective policy. The MANUFACTURERS' RECORD is not, as all our readers know, a partisan organ, nor does it have aught to do with political men or issues as such. But, believing most sincerely that the grand development now in progress throughout the South would come to a speedy

end under a national policy tending toward free trade, it hails with great satisfaction such evidences as were brought before the public last week of the strong hold protection has taken upon the voters of the South.

## Southern Winter Resorts.

In the spring of 1885 a group of State Commissioners were chatting together in the spacious parlor of one of their number at the New Orleans Exposition. They had been exchanging information about their respective States, and several of the Southern gentlemen had referred to the wealth of iron, coal and timbers in their mines and forests, and of the prosperity that was attending their rapid development. One of the company turned to Judge Sebring, Florida's genial commissioner, with the remark: "We have you there, Judge. Iron and coal are worth more than orange groves, and will prove more lasting sources of wealth." "I don't know about that," was the quick response; "but Florida has a mine worth all of these put together." Then, as the others looked surprised, he gave them some figures that were even more startling than his statement. "Florida's mine," he said, "is its winter visitors. Sixty thousand people come there between October and May. Their average stay is twelve days, and their average daily expenditure is \$10 a piece. Figure for yourselves our income from that mine." "Judge," exclaimed one of the party, "we give in. Florida has a bonanza yielding \$7,200,000 a year." Since that time it has been often said, by those to whom the statement was repeated, that it was incredible; but those who investigate the facts carefully will soon conclude that the aggregate Florida receives from her winter guests is even greater than the huge sum named. But Florida is by no means the only State that derives annually a handsome revenue from this source. From the famous Hygeia Hotel, at Old Point Comfort, southward to New Orleans, there are scores of well-patronized hotels in large cities, little towns and quiet country nooks, all of which have both regular and chance guests every winter, and if it were possible to collect accurate statistics from every one of them it would be found that fully fifteen to twenty millions of Northern money are disbursed among them every season. It is the return to the South, with compound interest, of the vast sums her wealthy citizens expended at the North for fifty summers before 1861. This great out-pouring of money is not made solely at the coast resorts. Norfolk, Virginia, gets a share of it; Wilmington, Charleston, Mobile, Pass Christian and New Orleans receive their proportions, but so, also, do Kittrells, Greensboro, Raleigh, Charlotte and Asheville in North Carolina; Columbia, Spartanburg and Sumpter in South Carolina;

Atlanta, Marietta and Thomasville in Georgia, and Chattanooga in Tennessee. There are scores of places not so well known, such as Tarboro and New Berne, in North Carolina, that are yearly visited by people who have found them pleasant spots for a few weeks of rest and recreation.

The tourists seeking a pleasant tarrying place in the South do so for many reasons. Some go for curiosity, many to escape the fierce wintry blasts, others to engage in hunting and fishing, still others to examine the opportunities for investment or speculation, multitudes because it has become fashionable, but by far the greater number because their health, or that of some one dear to them, compels the change of climate. Hence it is that the South has become the winter sanitarium of the United States. There are but two things that prevent a much greater exodus from the North. These are a lack of knowledge of where the desirable hotels are, and of the kind of recreation to be found at the many little-known resorts. The great summering places along the Atlantic coast, in the White Mountains, on the great lakes and Canadian rivers, have long been accustomed to furnish this information annually, and have reaped their rewards. Florida hotel men, very many of whom are proprietors of Northern houses, have advertised their places continuously; but aside from these and the Kimball, at Atlanta; the St. Charles, at New Orleans, and the Hygeia, very few Southern hotels are ever heard of, except by the immediate friends of those who have visited them.

## Foreign Trade of the United States.

The last monthly report of the Bureau of Statistics, giving the exports and imports of the United States for the first nine months of 1886, as compared with the same time last year, contains some interesting and instructive facts. Of animals, including cattle, horses, sheep and fowls, we imported for the nine months a little over \$5,600,000, against \$4,300,000 for the corresponding time last year. Chemicals, free of duty, were imported to the value of \$1,120,031, a very small increase over 1885; while of dutiable chemicals the value was \$9,356,280, an increase of \$400,000. Of gums, including Arabic, camphor, &c., the imports were \$3,396,750, a gain of over \$500,000. We bought during the first nine months of 1886 1,309,295 ounces of quinine, against 1,073,848 ounces last year. The imports of coffee for nine months rose to 428,116,000 pounds from 422,466,000 pounds last year. Eggs, of which it would seem we ought certainly to be able to produce enough, were imported to the extent of 10,607,901 dozen, a gain of 350,000 dozen over 1885. The value of furs and fur skins, free of duty, was \$20,296,000, a gain of nearly \$5,000,000; while of



dutiable furs the amount was \$3,330,000, a gain of \$1,000,000. Unmanufactured silk, which comes in free of duty, was imported to the extent of \$12,813,000, and manufactured silk \$24,036,460, a gain of \$4,300,000 in the former and nearly \$4,000,000 in the latter. In tea we increased our imports from 44,000,000 pounds, for the first nine months of 1885, to 57,857,000 pounds for the corresponding time this year, a gain of 13,700,000 pounds—the gain in value being \$2,300,000.

The imports of sugar from the Hawaiian Islands, which is admitted free of duty under our reciprocity treaty, are steadily increasing to the pecuniary profit of a few people, who control this trade, and to the loss of many others. Of sugar from these islands we have imported this year 204,735,677 pounds, valued at \$9,489,724, against 148,492,702 pounds, valued at \$7,189,471 for the same time 1885. In rice there was a decrease, being 4,841,000 pounds, against 5,573,000 pounds.

With the exception of barley, we import only about \$500,000 worth of breadstuffs; of barley the imports were 3,229,114 bushels, a gain of about 600,000 bushels. Cotton goods of all kinds were imported to the value of \$23,187,000, a gain of \$2,500,000; fancy articles, such as beads, dolls and toys, that we brought from the Old World, were worth \$5,650,603, an increase of \$1,800,000. Flax, hemp and jute, unmanufactured, came in to the value of \$8,098,484, and of manufactured \$16,838,234, a decrease of \$1,200,000 in the former, and an increase of \$1,100,000 in the latter.

We bought fruits and nuts valued in the aggregate at \$7,266,000, a decrease of about \$800,000, and of glassware \$4,808,000, an increase of \$500,000.

The line of imports in which the increase has attracted the greatest attention is iron and iron ore. Ore importations have risen to a very high figure, the aggregate for the nine months being 769,196 tons, a gain of 440,000 tons. The great bulk of this ore is received at Baltimore and Philadelphia, whence it is shipped to furnaces that use it in the production of Bessemer pig iron. Steel ingots, blooms, &c., have poured in heavily, the imports for September having been 30,043,239 pounds, and for September, 1885, only 4,332,071 pounds; while for nine months the aggregate was 175,586,125 pounds, compared with only 37,800,000 pounds during the same time 1885. Of tin plates we bought 462,467,945 pounds for the first nine months of the year, and last year 393,780,000 pounds. The aggregate imports of all kinds of iron and steel were valued at \$31,290,000, against, for the same time last year, \$23,070,429. It is believed that the imports of iron ore this year will foot up at least 1,000,000 tons. Precious stones have been in demand, and we bought in nine months of this year

\$7,194,534 worth, and last year we took \$4,573,000. The imports of rice have declined, being 29,930,000 pounds, a decrease of 3,500,000 pounds. Sugar is still the leading article of import, and in nine months we bought of this (not including that from Hawaiian Islands) 2,296,309,230 pounds, worth \$63,154,000, an increase in quantity of 82,000,000 pounds, and in value of nearly \$7,000,000. Of unmanufactured wool we bought 95,471,575 pounds, worth \$12,719,786, an increase in the former of 35,000,000 pounds, and in the latter of \$5,000,000; while of manufactured woolen goods our imports were \$35,854,798, an increase of \$7,000,000. In nearly all these leading articles there was an increase, and we are not surprised to find that in the aggregate the gain over the same time last year was \$67,000,000.

Comparing the exports of leading articles for the nine months ended September 30, 1886, with the corresponding time last year, we have the following exhibit:

Articles.	Exports for 9 mos. ended Sept. 30, '86.	Sept. 30, '85.
Agricultural implements...	\$ 1,877,089	\$ 2,232,577
Animals.....	9,844,713	12,266,837
Breadstuffs.....	113,235,921	104,311,900
Chemicals and drugs.....	3,803,476	3,475,436
Coal.....	3,074,243	2,990,492
Cotton, unmanufactured.....	113,677,543	88,744,214
Cotton, manufactured.....	10,340,380	8,768,061
Wearing apparel.....	11,602,457	9,671,388
Furs and skins.....	3,387,477	2,321,131
Iron and steel and manufactures of.....	10,561,764	11,317,284
Leather and manufactures of.....	6,608,469	6,074,367
Oil cake and oil-cake meal.....	5,623,525	4,248,776
Oils, animal.....	944,788	702,140
Oils, mineral.....	36,333,880	37,116,710
Oils, vegetable.....	1,839,268	2,175,856
Provisions and dairy products.....	66,233,790	77,062,632
Sugar and molasses.....	10,132,078	15,669,459
Tobacco and manufactures of.....	24,894,320	22,473,882
Wood and manufactures of.....	14,663,989	16,188,384

The total value of all exports for the nine months ended September 30, 1886, was \$475,411,322, against \$462,685,242 for the corresponding time last year. In breadstuffs and cotton there was a large increase, but in some other lines, especially provisions, a considerable decrease is noted.

As an indication of the general improvement in manufacturing interests throughout the South, the following extract from Messrs. Lowe & Tucker's weekly letter from Chattanooga to the MANUFACTURERS' RECORD will be of interest. They write:

There is no change to note in the progressive and upward tendency of all lines of trade and manufacturing interests, and prices are gradually improving. All manufacturing enterprises of every kind and description throughout the entire South are now running to their fullest capacity, and the prices that the proprietors are getting for their goods are on such basis that fair profits will be shown at the close of the year's account. There is no letting up at all in the demand for pig iron, and sellers are in a position, as a general thing, to name their own figures, which now range from \$16 to \$16.50 for No. 1. The iron mills are having all they can do on track supplies, for which at present there is a big demand. Orders for fish plate have been obliged to go to other sections to be entered, although advance figures were offered. Everybody is looking ahead for still better times.

PROF. ANDREW S. MCCREATH, State geologist of Pennsylvania, whose report on the mineral resources of Southwest Virginia in 1884 attracted so much attention, has been engaged by the Norfolk & Western Railroad Co. to make a second investigation of the minerals tributary to their line, including their new branches.

### Activity in Railroad Building.

One of the most potent factors in the present activity in the iron trade is the very large railroad construction in progress. A few months ago, when it was predicted by the Railway Age that the new railway mileage of 1886 would not fall short of 6,000 miles, there was considerable doubt as to the correctness of this statement, inasmuch as the entire new mileage for 1885 was only 3,131 miles. It is already proven, however, that instead of stopping at 6,000 miles, the total will probably run up to at least 7,000 miles, and possibly more, or a larger mileage than in any preceding year except in 1881 and 1882. The returns to the Railway Age show that during the first ten months of the year there were 216 lines under construction and that 5,439 miles of new main track were laid. As a large amount of preliminary work has been done in the way of grading, bridge building, &c., preparatory to actual track-laying, which is now going on in many States and on many roads, the new mileage during November and December will be very great. The mileage of new track by States from January 1 to October 31, 1886, was as follows:

State.	Miles.	State.	Miles.
Alabama.....	18	Mississippi.....	119
Arkansas.....	28	Montana.....	48
Arizona.....	30	Nebraska.....	455
California.....	168	New Jersey.....	26
Colorado.....	24	New York.....	29
Dakota.....	536	North Carolina.....	134
Florida.....	259	Ohio.....	54
Georgia.....	62	Oregon.....	24
Idaho.....	13	Pennsylvania.....	106
Indian Territory.....	31	South Carolina.....	101
Illinois.....	234	Tennessee.....	10
Indiana.....	53	Texas.....	404
Iowa.....	338	Virginia.....	24
Kansas.....	957	Washington Ter.....	136
Kentucky.....	60	West Virginia.....	49
Louisiana.....	9	Wisconsin.....	346
Maine.....	3	Wyoming.....	83
Maryland.....	27		
Massachusetts.....	3		
Michigan.....	131	Total in 39 States and Territories.....	5,439
Minnesota.....	297		

With the exception of Texas, Florida, North Carolina, Mississippi and South Carolina, there has been rather less activity in the building of new roads than had been expected. However, many of the most important lines on which track-laying was expected to have commenced, are now getting into shape for more vigorous work. The outlook for railroad construction in the South during the coming year is very good. A number of very important lines will soon be under active construction, and within a year or two the railroad mileage of the South will be largely increased.

### Railroad Commission.

The recent decision of the supreme court of the United States has had the effect of cutting down the labors of the Mississippi railroad commission to so low a point that we think the legislature at its next session will probably see the necessity of saving to the State the few thousand dollars appropriated for the support of that ornamental feature of its government. There are already under this decision only a few miles of railroad left for the commission to supervise, and the probability of the extension of these into other States will leave it nothing to do but to draw its little salary.

We have always thought that the regulation of railroads or of other industries to the extent of prescribing rates and prices, was something that legislatures were traveling outside of their legitimate province to attempt. If it is proper to fix prices for railroads, it is equally just to fix the price that shall be paid by oil mills for cotton seed, or by merchants for the cotton itself. The same principle would be equally applicable to all branches of business, and to all classes of products.—Natchez Democrat.

### Attractions of Wilmington as a Winter Resort—Improved Farming Methods.

[Special correspondence MANUFACTURERS' RECORD.]

WILMINGTON, N. C., Nov. 4, 1886.

Phoenix-like this city is fast rising from the ashes of the great fire that swept along its water front last spring, destroying immense values of property and obliterating many ancient landmarks. That fire, like many in other cities, was a blessing in disguise. New buildings have been erected of greater capacity and more substantial than those that were burned, and many others will be put up during the next twelve months. There is a prevailing spirit of enterprise and push noticeable everywhere, and a hopefulness among the merchants and business men that promises well for the future. The volume of trade is increasing from week to week, and the foreign business is growing rapidly. Wholesale grocery and dry goods houses report unusually good fall sales, and fair collections during the summer. The cotton market is booming. The receipts for September and October, 1886, were 53,694 bales, an increase of 7,648 bales over the corresponding months of last year. The exports of cotton last month were 28,133 bales, a gain of 3,786 bales over the same month last season. Referring to this, Mayor Hall said: "The only discouraging feature is the absence of the American flag from the masts of the great ocean carriers. We have English, German and Scandinavian ships here constantly, the Danish flag predominating, but only now and then an American. Ships drawing 18 feet can now load at our wharves and go out with the tide with full cargoes, and when the government engineers have completed their work we shall have upwards of 20 feet."

Wilmington has been for some time considering the expediency of building two railroads—one to Fayetteville, to connect with the Yadkin Valley Railroad; the other to the broad waters of New river in Onslow county. Both these roads are essential to the city's future prosperity and ought to be completed at once. There seems to be no division of public sentiment as to the need for these roads, but there is considerable difference of opinion as to how the money for their construction shall be raised. The last road is of especial importance, for it would give to this market absolute control of one of the most productive cotton districts of North Carolina, and would enable her to open up an enormous fish and oyster trade.

The delightfulness of Wilmington as a winter resort has never been duly set before Northern travelers. One reason why the people have never done much to advertise the attractions of their city is doubtless that they had no hotel kept according to modern ideas of comfort, but that drawback no longer exists. Last year the Orton House was built and occupied by Wm. A. Bryan, of Connecticut, whose fame as the landlord of the popular Montowell House in Branford is known to thousands of people who seek the seaside summer resorts of Long Island Sound. This is a large brick building, in which are commodious sleeping rooms, good beds, and a cuisine equal to any. As Wilmington is but twenty hours' ride from New York and on the direct route of Florida travel, this house and the attractions of the city combined ought to make this one of the regular resting places for Northern tourists.

Fourteen miles from Wilmington is Rocky Point, a station of the Atlantic Coast Line Railroad. A few stores and residences are all there is of the village; but east of it a little less than three miles is the rocky ledge pushing out into the current of the Cape Fear river that originally gave the name to this locality. This and many hundred acres of land adjoining it belong to the firm of French Brothers, farmers and manufacturers of lime and of several fertilizers, for which this rock and a marl bed on the property



supply the material. The peculiarities of these deposits are: First, a limestone ledge cropping out at the river which appears to be of a uniform thickness of five feet, and to underlie the soil of a very extensive area. Beneath this tough, solid shell-limestone is a conglomerate two feet thick of marl filled with coprolites, which scientists claim to be the fossil dung of fishes. These phosphate nodules vary in size "from a pumpkin to a bean." This conglomerate is mined and prepared for use in two forms—one is by grinding only; the other by roasting and then grinding it. The first is called North Carolina phosphate; the second phosphatic lime. The first contains 16.42 per cent. of phosphate and 54.71 per cent. of carbonate; the second 20.34 per cent. of phosphate and 37.52 per cent. of carbonate. The lime rock contains 52.90 per cent. of lime and 42.33 per cent. of carbonic acid, the two being the equivalent of 95.23 per cent. carbonate of lime. On the same premises is a greyish white marl whose analysis shows it to be the counterpart of English chalk. This also is mined and sold as a fertilizer. On the property is a large roasting kiln, a mill for grinding, a barrel factory, and a cotton gin and haying-press. But while attending to these various branches of quarrying and preparing their rock and marls for market, French Brothers find time to conduct extensive farming operations. Their land is divided into tracts and let out to tenants, who cultivate under the supervision of the firm, which also plants every year 50 acres in field crops, giving corn the preference. They also put in radishes, peas, potatoes and other early vegetables for the Northern market, and since quick transportation has been furnished, they are getting the ground in shape for a large strawberry patch. Every other year they ship early harvest apples in May, which command a ready sale at the North. They cultivate staple field crops—corn, cotton, peanuts and other things—more as a model and object lesson for their tenants than for the profits. Their place is called the Excelsior plantation. On an oak tree near the house is a case with a glass front, beneath which, written neatly, is a paper on which are recorded the plantation rules. These have been in force several years and are faithfully followed by tenants and employees. One thing noteworthy at Excelsior plantation is the careful observance of the rule "a place for everything and everything in its place." Order, system, thoroughness in all things are maintained, to the profit of the owners and the satisfaction of the tenants, and the latter are said to be the best of their class in the country.

There are three brothers in the firm, all Maine men. The characteristics of their down-east training are apparent in every department of their business. B. S. P.

The letter written by Mr. J. T. Craik to the *Baltimore MANUFACTURERS' RECORD*, which appears on the first page of this issue, has already begun to bear good fruits. Parties from North Carolina have written to Mr. Craik in regard to starting a large sewing machine factory in our city. The letter has been referred to the Merchants' Exchange to take action upon. It is to be hoped that this enterprise will succeed, as an establishment of this kind here would be the only one in the South.—*Columbia (Tenn.) Herald*.

The above is a good illustration of the benefits resulting from the work of the *MANUFACTURERS' RECORD*.

THE Boston Commercial Bulletin very aptly says: "If the adoption of free trade will permit us to more successfully compete with Great Britain for the markets of the world, why, in the name of common sense and British shrewdness, is she so anxious to have us try it!"

Subscribe to the *Manufacturers' Record*.

## The Future of Morristown.

[Special correspondence *MANUFACTURERS' RECORD*.]

MORRISTOWN, TENN., Oct. 30, 1886.

The more I investigate the situation and surroundings of this city, the more am I impressed with the certainty that it is to be to Upper East Tennessee, Western North Carolina, Southeastern Kentucky and Southwestern Virginia, what Chattanooga is to Lower East Tennessee, what Birmingham is to Central Alabama, what Atlanta is to Northeastern Georgia, viz: a great railroad, manufacturing and commercial center.

In my last I referred to the efforts the Louisville & Nashville and the Richmond & Danville Railway syndicates are making to reach this point, and suggested the probability of the Baltimore & Ohio also taking it in its grand route to Birmingham and the gulf.

The Richmond & Danville is now only 45 miles from here, at the break of the French Broad river through the Alleghany Mountains; and the route from its present terminus, Painted Rock, or, as called on the railroad maps, Unaka, is an inexpensive one,—down the French Broad river to within 12 miles of Morristown, then up the Nola-Chucky 3 miles, and then nine miles through a gently rolling country.

The Louisville & Nashville is building from Corbin, on its Knoxville branch, toward Cumberland Gap as fast as men and money can build, and before the summer heats of 1887 are here it will have established its outworks in this famous gap, 40 miles north from Morristown.

The point where the French Broad river breaks through the Great Smoky or Alleghany Mountains, on the south from here, is the only practicable opening through that range of mountains, except the Pigeon River Gap, for more than 100 miles.

On the other hand, Cumberland Gap is the only practicable opening for a railroad through the Cumberland Mountains between Pennington's Gap and Big Creek Gap, a distance of about 100 miles. Morristown is situated in a direct line between and about equi-distant from these two great natural clefts.

Now the Louisville & Nashville and the Richmond & Danville Railway Companies are on friendly terms. They are very strong, and they occupy respectively immense territories on the north and the south of the country occupied by the East Tennessee, Virginia & Georgia. The one desires to get access to the South Atlantic coast, the other wants access to the coasts of East Tennessee and Southeastern Kentucky, but between them lies the E. T., Va. & Ga., confident in its strength to protect its own boundaries, and, therefore, defiant and imperious; and so it is believed that they have "pooled their issues," formed an alliance, offensive and defensive, and undertaken the titanic task of "squeezing out" or "heading off" this latter company. But at no point in all the hundreds of miles of railway owned by these companies do they touch each other. To accomplish any part of their purpose they must form a junction. The shortest distance between them now anywhere throughout their extended systems is from Unaka on the south, via Morristown, to Cumberland Gap on the north. By building less than 45 miles each, the one from Unaka, the other from Cumberland Gap, they can form the junction they desire at Morristown.

I have heretofore spoken of the beauty of Morristown's location, of its elevation, its healthfulness, its pure water, and temperate climate, and the grandeur of its surroundings; but these things alone are not sufficient to make a great city, not even when supplemented by the most ample facilities for transportation. There must be employment for men and women at remunerative wages.

An inland city must be warmed with the glow of furnaces, enlivened with the buzz of spindles and the clank of looms, and elec-

trified with the increasing activities and contacts of many and diversified industries.

Now, what opportunities does Morristown offer for the building of manufacturing establishments?

My investigations here enable me to speak with confidence upon this point. The city is situated in the center of the most extensive iron ore belt in the United States, and within 45 miles of vast beds of coking coals, which Prof. Proctor, State Geologist of Kentucky, pronounces equal to the coking coals of the Connellsville region.

The iron ores of East Tennessee, contiguous to Morristown, are brown hematite, specular, dye-stone and manganese. These ores are found, some in massive bodies, solid, requiring the drill and powder to raise them; others, loose, intermixed with the soil. The city is built alongside of splendid quarries of gray and variegated marbles.

Only 10 miles to the south, are the Lead-vale Lead & Zinc Mines, from which the lead was obtained which was used by the Tennessee riflemen in the battle of New Orleans in 1815.

Millions of acres of timber, poplar, pine, oak, hickory, maple, chestnut, chestnut oak, buckeye, walnut, cherry, locust, &c., &c., are within easy reach. On the north the Holston river flows within three miles of the city, and on the southeast the Nola-Chucky river is within seven miles, and on the south the French Broad river is within ten miles.

It is said, and I think truthfully, that more than ten millions of acres of original forest, untouched almost by the woodman's axe, lie about the headwaters of these rivers and their tributaries in Upper East Tennessee, Western North Carolina and Southwestern Virginia, and it can all be floated and rafted to market at Morristown.

Recently extensive quartz veins, carrying both gold and silver, have been discovered in the Smoky Mountains, just south of the city. Specimens that I have seen are very rich. One specimen, a partially decomposed quartz, carrying oxides of iron, with gold and silver both, I thought equal to anything in the way of mineral ores—precious ores—I have ever seen.

In addition to these things, which are only awaiting development, it may be said that Morristown, being almost midway the great valley of East Tennessee, is in the richest and most productive agricultural region of the South. Surrounded as it is on every hand with all the elements of wealth,—mineral ores of great variety and abundance, coal, timbers and a productive soil, blessed with a climate singularly mild and equable, with an atmosphere so pure that malaria cannot exist, with the means of transportation by her already completed railroads, described by me in a former letter; with the absolute certainty of two more railroads, and the probability that one, possibly two, more will be built in a short time, is it any wonder that I have marked this young city down in the record of my journeyings as one of the centers of industrial prosperity in the New South?

I have not yet spoken of the citizens or the business of the place, and this letter has already grown too lengthy to attempt it. Suffice it to say I find the people alive and wide awake to the interests and possibilities of the place and firm believers in its magnificent future, and heartily appreciative of the *MANUFACTURERS' RECORD* and such journals as are devoted to the development of the South. K.

MANAGERS of mills, factories, furnaces, mines, etc., and parties starting manufacturing enterprises, and needing machinery or supplies of any kind, will find it profitable to consult the advertising columns of the *MANUFACTURERS' RECORD*. Its pages contain names of the best houses in the country among manufacturers of and dealers in machinery and mill supplies.

## Cheap Prices and Degraded Labor.

Mr. P. C. Carroll, of Louisville, Ky., writes to the Bulletin of the Iron and Steel Association as follows:

"Is not the Hon. Carroll D. Wright a little mistaken in saying that 'history has not begun to tell the story of the suffering of labor prior to the advent of the modern industrial system; it was the disgrace of nations that such sufferings existed, and it was pride for their own honor that caused legislation'?"

I wonder if Mr. Wright has ever read John Hampden, Jr.'s History of the English Aristocracy. Here is what that historian says of the condition of the masses of the people during the long, dark ages when prices were low and everything cheap, when the free trade cry of 'buy cheap' prevailed: 'To dig and to swelter in hewing and in groaning under heavy burthens was the bitter lot of the multitude. To the few were given all the lands and all the honors of all the nations, and to the masses were allotted the slavery and the bondage of serfdom. Royal and noble robbers strode over the earth and lorded it with the lash and the dungeon and the halter over an ignorant, frightened people. So low, so degraded, was the condition of the great mass of the people, they maintained that God and His angels had either fallen asleep or deserted them.'

Sir Francis Eden has written The History of the Poor. The noble author tells us that: while things were bought and sold cheap, and while there were no 'bloated capitalists,' 'the workingmen envied the beasts of the field.' In Knight's History of England (volume 3, page 77) we are told that while things were bought and sold cheap 'the laws consigned the workingmen to the fetter and the whip.' In volume 2, page 252, Knight says that while things were cheap 'the poor were cast into prisons, they were placed in stocks, they were whipped at the cart's tail, they were hanged in batches of tens and twenties at the same time from the same gallows.' I could fill several numbers of The Bulletin with extracts from standard histories showing the poverty, the ignorance, the misery, and the degradation of labor while things were bought and sold cheap. History shows that while things were bought and sold cheap the masses of the people were worse housed and worse fed than the beasts which they envied. History also shows that as prices advanced, the physical, the mental, the moral, the social, and the financial condition of the farmer, the laborer, and the mechanic advanced with them. Let me refer again to Knight's History:

'From 1600 to 1630 prices advanced 100 per cent., owing to the increase of gold and silver. This advance in prices gave an impulse to production and cultivation, creating a demand for labor, and thus the workingmen emerged from the serfdom of ages.' (Volume 3, page 276.)

It was not 'pride for their own honor,' as Mr. Wright says, that caused the nations to legislate in favor of labor; it was the increase of the precious metals that did it all. With every increase of money there came an increase in prices, and with every increase in prices there came more and more freedom and joy and comfort and happiness.

Just exactly in proportion as you reduce prices by bringing us workingmen into competition with pauper labor you force us back into the condition from which labor has risen. Buy cheap! Buy cheap! Yes, buy cheap and sink to a level with those who produce cheap.

I think I have proved that history has told the suffering of labor when things were produced and sold cheap. I believe that the workingmen of the world owe their advancement to the increase in prices and not to the pride or the honor of nations."



# CONSTRUCTION DEPARTMENT.

**WE PUBLISH, every week, a list of every new factory, of whatever kind, projected anywhere in the South; every railroad undertaken, and every mining company organized. This information is always fresh, and, by enabling manufacturers to correspond with the projectors of such enterprises before their supplies of machinery have been purchased, is of great value. Manufacturers will find it to their interest to read this department carefully each week.**

## ALABAMA.

The Decatur Charcoal Chemical Works, lately reported as organized at Decatur, Ala., to build a charcoal furnace, have commenced work.

It is stated that a company will be incorporated at Selma, Ala., to build an electric street railroad.

A company is being organized at Decatur, Ala., to build an iron furnace. A flour mill is contemplated at the same place.

The Birmingham Bridge Co., capital stock \$250,000, has been incorporated at Birmingham, Ala., to manufacture iron and wooden bridges, bolts, nuts, etc., by A. B. Simms, of Nashville, Tenn.; W. H. Sellers, Dayton, O.; C. D. Reamer, Oberlin, O.; Thomas Karney, New York, and Robert Jemison and J. C. Moore, of Birmingham. Works, to employ 150 hands, will soon be built.

Messrs. Golden & Philips will erect a stamp mill at Draketown, Ala., soon.

It is reported that S. F. Crews, Tallapoosa, Ala., will erect a stamp mill and a furnace.

The Edison Electric Illuminating Co., capital stock \$75,000, has been incorporated at Birmingham, Ala., by Willis Shaw and and Leigh Carroll. They will soon commence erecting their plant.

I. R. Hochstadter, Walter M. Davin, Louis Braun, B. Wellman and James J. Garrett have incorporated at Birmingham, Ala., the Knebel Engine Co., capital stock \$25,000, to manufacture the Knebel engine and other machinery.

The Coalburg Coal & Coke Co., Birmingham, Ala., have increased their capital stock from \$510,000 to \$700,000, previously reported, and have decided to erect a 100-ton furnace on Village creek and build 150 additional coke ovens at Coalburg.

J. M. Badgett is erecting a tannery at Jackson Hill, Ala.

W. A. Posey, Birmingham, Ala., will erect a saw mill.

Phil. Schillinger, Birmingham, Ala., has let the contract to enlarge his brewery to J. B. Smith. The cost, including machinery, will be about \$30,000.

Christopher & Stewart, Atalla, Ala., have leased the Winchester ore mines at Gadsden, and will develop them. They are preparing to build a street railroad from Gadsden to Atalla, and want to purchase second-hand rails from 16 to 35 pounds.

The Anniston & Atlantic Railroad, A. I. Tyler, Anniston, Ala., president, previously reported to be extended from Sycamore to Syllauga, will be extended 6 miles beyond Syllauga.

An effort is being made to organize a company at Mobile, Ala., to build a large dry dock.

The Navy Cove Harbor Co., capital stock \$600,000, has been incorporated at Mobile, Ala., by T. P. Brewer, Seymour Bullock, T. McNulty and Joseph I. Clemmons. The object of the company is to build docks, granaries, &c., at Navy Cove and Fort Morgan.

Horace G. Wetty, Cleveland, O., has received the contract to build several bridges for the Kansas City Railroad, now being built from Birmingham, Ala., to Memphis, Tenn.

A stamp mill will be erected near Tallapoosa, Ala., by John Cross & Son.

## ARKANSAS.

The Neel Oil Co., capital stock \$50,000, has been incorporated at Pine Bluff, Ark., to manufacture cotton-seed oil and gin cotton, by T. Heaves, W. A. Wright, H. P. Johnson, W. H. Haynes and U. Urquhart.

## FLORIDA.

R. A. McLane, Kissimmee, Fla., will build a narrow gauge railroad to haul timber for his shingle mill.

Walter Murray, Sanford, Fla., will build an addition to his carriage factory.

It is reported that C. Snodgrass, Milton, Fla., contemplates erecting an ice factory at Tampa.

H. S. Kedney, Orlando, Fla., will erect a three-story brick building, 72x143 feet.

The Bank of Ocala, Ocala, Fla., will erect a new brick building.

W. F. Taylor, previously reported as to build a sash, door and blind factory at Ocala, Fla., will also erect a saw mill.

## GEORGIA.

Pelligrini & Castleberry, Atlanta, Ga., are enlarging their terra cotta works.

W. S. Payne & Bro. will rebuild their saw mill and gin, 14 miles from Carnesville, Ga., reported in this issue as burned.

New machinery has been erected at the Atlanta Water Works, Atlanta, Ga., at a cost of \$10,000.

R. Eatman will erect a turpentine distillery at Rocky Ford, Ga.

John Payne, Shellman, Ga., contemplates erecting machinery for manufacturing fertilizers.

A bill has been introduced in the Georgia legislature to incorporate the Macon, La Grange & Birmingham Railroad Co.

R. B. Reppard, W. E. Kay, C. P. Good-year and others will incorporate a company at Brunswick, Ga., to build a street railroad.

## KENTUCKY.

Handley & Sandefur, Henderson, Ky., have purchased machinery for a 75-barrel roller flour mill.

It is reported that the Hartsfeld Smelting Furnace & Mining Co., Newport, Ky., contemplates erecting works for manufacturing their furnaces.

The Security Storage Co., Louisville, Ky., will erect a three-story brick building, 140x222 feet, to cost \$20,000.

The Golden Milling Co., capital stock \$5,000, has been incorporated at Covington, Ky., by A. B. Clossen, Jr., W. R. Smith, T. B. McFarland and Joseph Wohner.

The Western Contract Co., Louisville, Ky., have the contract to build a railroad from Dekoven, Ky., to the Chesapeake & Ohio Railroad, or to the Cumberland river.

## LOUISIANA.

The refinery of the Burden Central Sugar Refinery Co., previously reported as moved from Glencoe to near Franklin, La., has been enlarged in capacity.

Callahan & Lewis, New Iberia, La., are enlarging their tank and cistern factory and putting in new machinery.

A company with a capital stock of \$25,000 will be organized at Baton Rouge, La., to build a street railroad.

The contract to build the three-story refrigerating building for the Southern Brewing Co., New Orleans, La., previously reported, has been let to A. Theisen at \$54,550.

A creamery will be erected at Jeanerette, La.

John R. Jones, Shreveport, La., has received the contract to erect a building for the Harmony Club to cost about \$10,000.

It is stated that an ice factory is to be started at Pattersonville, La., by S. R. Guyther.

## MARYLAND.

S. J. Pope & Co., of Chicago, Ill., will receive the contract to furnish the steam-heating apparatus for the Marine Hospital buildings, at Baltimore, at \$9,947.

William Heinekamp & Sons, Baltimore, will rebuild their furniture factory reported in this issue as burned; loss \$25,000.

The National Press Brick Co., 31 Corcoran Building, Washington, D. C., will hold a meeting December 8, to consider increasing their capital stock from \$250,000 to \$500,000.

The Easton Electric Light Co., capital stock \$20,000, has been chartered at Easton, Md., with P. S. Reed, president, Oswald Tilghman, vice-president; Chas. T. Wrightson, secretary, and William E. Shannahan, treasurer. A plant will be erected at once.

The Union Mining Co., Mount Savage, Md., are building a large addition to their fire-brick works.

The City Council of Annapolis, Md., have appointed a committee to ascertain the cost of lighting the city with electric lights.

The Valiceto Mining and Smelting Co., capital stock \$48,000, has been incorporated at Baltimore, Md., by David H. Carroll, John J. Haines, Charles A. Magne, Michael Offley and Horace Magne.

## MISSISSIPPI.

The Meridian Sash & Blind Co., Meridian, Miss., have doubled the capacity of their factory.

## NORTH CAROLINA.

The Keystone Mica Co., New Cumberland, Pa., have leased and will develop a mica mine, 7 miles from Waynesville, N. C.

R. M. Orrell, Fayetteville, N. C., has erected machinery for a plug tobacco factory.

The name of the company reported last week as incorporated at Lexington, N. C., to erect a smelting plant, is the Piedmont Reduction Co. The capital stock is \$100,000. The plant will be located near Thomasville. C. C. McPhail is president; C. F. Crosel-mire, treasurer, and S. H. Emmens, secretary. Office of the company, 115 Chestnut street, Newark, N. J.

S. N. Ferguson, Allenton, N. C., will rebuild his saw mill lately reported as burned. The machinery has been ordered.

The Council Tool Co., Councils Station, N. C., has been formed to manufacture tools.

## SOUTH CAROLINA.

The gin of F. E. McKenzie, near Piedmont, S. C., burned several weeks ago, has been rebuilt.

## TENNESSEE.

Philip R. Wilhoite, Normandy, Tenn., will rebuild his mill, reported last week as burned; loss \$6,000.

M. B. Coleman will erect a factory at Clarksville, Tenn., for stripping and prizing tobacco.

Hawkins & Co. will erect the electric light plant at Tullahoma, Tenn., lately reported. They have ordered the necessary machinery.

The works of the Knoxville Car Wheel Co., Knoxville, Tenn., are being enlarged.

The Excelsior Coal Co. has been incorporated at Clinton, Tenn.

John Dowling, C. E. James, J. T. Cahill, R. L. Watkins, J. F. Shipp and others will incorporate at Chattanooga, Tenn., the Dowling Furnace Co., capital stock \$200,000, to build the 100-ton iron furnace, lately reported as to be put up there.

The Clifton Cement Co. has been formed at Erin, Tenn., to manufacture cement.

It is stated that Willingham & Co., Chattanooga, Tenn., will soon begin work on their large new saw mill, previously reported.

New machinery is being put in the water works at Memphis, Tenn.

Ristine, Campbell & Co., Chattanooga, Tenn., reported last week to build a large addition to their furniture factory, want to purchase a new engine, furniture planer and other machinery. They will also build a warehouse 50x200 feet.

The Champion Manufacturing Co., Knoxville, Tenn., lately organized, have refitted the Magnolia Mills with new machinery, with a capacity of 500 bushels of meal per day. A broom factory is being established by the company also.

The Chicaw Cooperage Co., Memphis, Tenn., will rebuild their works, reported in this issue as burned, loss \$75,000.

The Chattanooga Plow Co., Chattanooga, Tenn., will build a new foundry building.

The Chattanooga Water Co., Chattanooga, Tenn., previously reported as chartered, will soon commence building their works. G. W. Thompson is president.

S. H. Baird and G. A. Ramsay, of Big Rapids, Mich., have bought 40 acres of land at Knoxville, Tenn., and will build a large planing mill.

The Percy Cane & Corn Harvester Co. has been organized at Nashville, Tenn., to manufacture the Percy harvester, with Isaac Reese as president; J. H. Moore, vice-president, and W. W. Smith, secretary and treasurer.

The Peoples' Railway Co. will probably build a street railroad at Nashville, Tenn.

Howell & McLaurin, Chattanooga, Tenn., will erect a cotton warehouse, to be covered with corrugated iron.

## TEXAS.

The contract to build the water works at Sherman, Texas, previously reported, has been awarded to W. C. Conner, of Dallas, at \$73,000.

The Southern Kansas Railway Co., capital stock \$3,000,000, has been incorporated in Texas, to build about 600 miles of railroads, by A. A. Robison, of Topeka, Kan., George Sealy, of Galveston, Texas, and others.

## VIRGINIA.

Kanode Bros. have lately put some new machinery in their mill near Blacksburg, Va.

The Norfolk & Western Railroad Co., Charles G. Eddy, Roanoke, Va., vice-president, will make surveys for a branch road from Petersburg to the granite quarries in Dinwiddie county.

A flour mill is being erected near Doe Hill, Va., by J. Synors.

Jacob Bonsack, Bonsack's, Va., is putting some new and improved machinery in his woolen mill.

It is reported that J. H. Bartlett, of London, England, has purchased the mines of the Roanoke Zinc and Silver Mining Co., Roanoke, Va., for \$600,000.

The Crozier Steel and Iron Co., Roanoke, Va., have, it is stated, purchased 2,000 acres of iron ore land in Pulaski county.

## LOCKWOOD, GREENE & CO. MILL ENGINEERS

Office, 65 Westminster St., Providence, R. I.,

Carefully prepared plans, specifications and estimates furnished for the construction, equipment and organization of new mills and the revision and improvement of old.



## WEST VIRGINIA.

R. J. McConnell and Frank Smith, West Union, W. Va., are erecting a new flour mill.

The Southern Coal Co., capital stock \$100,000, has been incorporated at Charleston, W. Va.

The Parkersburg Electric Light & Power Co., has been chartered at Parkersburg, W. Va., by D. R. Cook, George E. Milligan, L. A. Cole, Henry Keller and others.

The Kanawha & Ohio Railroad Co. will erect a three-story brick depot at Charleston, W. Va.

J. G. Bolles & Son, Little's Mills, W. Va., are improving their flour mill.

## BURNED.

The works of the Walker Horse Shoe Co., Baltimore, Md.; loss \$50,000.

The Charleston Cotton Factory, Charleston, S. C.; damaged by boiler explosion.

The whiskey distillery of the John Thixton Distilling Co., Owensboro, Ky.; loss about \$75,000.

The saw mill, corn mill and gin of L. Reid Watson, in Anderson county, S. C.; loss \$1,500.

The saw and grist mill of Philip Grabet, in Muhlenburg county, Ky.; loss \$3,500.

The works of the Chickasaw Cooperage Co., Memphis, Tenn.; loss \$100,000. Will be rebuilt.

The saw mill and gin of W. S. Payne & Bro., 14 miles from Carnesville, Ga. Will be rebuilt.

The piano factory of William Heinekamp & Son, Baltimore; loss \$25,000. Will be rebuilt.

The gin and mill of W. S. Scattergood, Perry, Ga.; loss \$1,000.

The gin and grist mill of Rufus Swain, 6 miles from Plymouth, N. C.

The saw mill and gin of Charles Washburne, 6 miles from Shelby, N. C.; loss \$3,000.

The steam gin and mill of Mr. Robertson, Legrand, Ala.

The Dixie Iron Foundry at Tyler, Texas.

The gins of D. B. Evans, 7 miles from Wrightsville, Ga.; Andrew J. Cleveland, Rockcastle, Ga.; the Switzboro Mill Co., near Columbus, Ga.; John Neilson, Columbus, Miss.; J. T. Woodward, in Meriwether county, Ga.; E. R. King, in Clay county, Ga.; M. A. Murkirt, in Edgefield county, S. C.; Mr. Turner, in Elmore county, Ala.; the Hartsboro Mill Co., Hartsboro, Ala.; James F. Smith, Irvin's Cross Roads (P. O. Tennessee), Ga.; Fred Reames, Bishopville, S. C.; Brown & Clanton, 4 miles from Charlotte, N. C.; L. McArdle, in Russell county, Ga.; M. F. Sanders, in Chattahoochee county, Ga.; W. H. Veal, Sandersville, Ga.; J. F. Jackson & Brother, Concordia Parish, La.; Lewis & Franklin, Delray, Ga.; Hardy Cross, in Dooly county, Ga.; B. H. Epperson, Bascom, Tenn.; L. A. Standford, Lexington, Tenn.; E. M. Hughes, Orangeburg, S. C.; W. S. Bamberg, 4 miles from Bamberg, S. C.; J. K. Bullock, Edgecombe county, N. C.; and J. D. Fowler, Elgin, Texas, have been burned.

BIRMINGHAM, ALA., Nov. 6, 1886.

*Editor Manufacturers' Record:*

I have contracted for a large addition of cellar room to my brewery, which will give me more than double the capacity of storage.

PHIL. SCHILLINGER.

COLUMBIA, TENN., Nov. 4, 1886.

*Editor Manufacturers' Record:*

We are putting in a new engine and boiler to increase our facilities for manufacturing meal, hominy and grits, and granulated and pearl meals, which will make our capacity about 2,500 bushels per day.

H. A. MCLEMORE & BRO.

## Enlarging Factory.

JACKSONVILLE, FLA., Nov. 4, 1886.

*Editor Manufacturers' Record:*

I have bought out Mr. Davis' interest, and I am now putting in a 15,000 pound kettle crotcher, engine and a bone mill, and in about one month from now, I will be prepared to convert all the bones into fertilizer and all the grease into soap that can be had in this and adjoining States.

C. PETERS.

## Will Erect Electric Light Plant.

TULLAHOMA, TENN., Nov. 3, 1886.

*Editor Manufacturers' Record:*

Messrs. I. Hawkins & Co., of this place, will commence in a few days to put in their machinery, &c., to erect a plant to furnish private citizens with electric lights.

W. A. MARSHALL.

## Will Rebuild Mill.

NORMANDY, TENN., Nov. 4, 1886.

*Editor Manufacturers' Record:*

I am now at work on my foundation, preparatory to rebuilding my mill at once.

PHIL. B. WILHOITE.

## Building Cotton Compress.

HELENA, ARK., Nov. 2, 1886.

*Editor Manufacturers' Record:*

I am now having a compress built and expect to have it in working order by the 1st of January.

D. H. CREBS.

JACKSON'S FERRY, VA., Nov. 6, 1886.

*Editor Manufacturers' Record:*

I have sold about 30 acres of land and mineral rights, and about 250 acres more to George T. Mills, from Philadelphia, Pa. I think he expects to form a company to build a large furnace at Pulaski City, as he has bought several other mineral properties on Reed Island, in this county.

J. P. W. SANDERS.

## Will Build Street Railroad.

HENDERSON, KY., Nov. 2, 1886.

*Editor Manufacturers' Record:*

The Henderson Street Railway Co. has been duly organized, and proposes to commence building operations within 60 days. For particulars write J. F. Clay, attorney, at this place.

DAVID BANKS.

GREENVILLE, S. C., Nov. 4, 1886.

*Editor Manufacturers' Record:*

We expect to start a distillery within the next ten days. The two stills will be run with a capacity of eight gallons per day.

ROSS & CENTER.

## Building Water Works.

MOBILE, ALA., Nov. 1, 1886.

*Editor Manufacturers' Record:*

Messrs. Samuel R. Bullock & Co., of 11 Wall street, New York, water-works contractors, broke ground to-day, and will have the Bienville Water Works Co's plant completed by July 1st, 1887. Water will be taken from Clear creek, 10½ miles from the city, and the reservoir 7½ miles from the city. Will have altitude of 230 feet above city.

JOHN G. FRIEND.

HUMPHREY, ARK., Nov. 1, 1886.

*Editor Manufacturers' Record:*

We have now running a saw and shingle mill of 160-horse-power, cutting cypress lumber and shingles. Have just commenced operations. The company has a capital stock of \$75,000—\$45,000 paid in. The officers are Nathaniel Weston, president; W. R. Weston, secretary and treasurer; directors, those named and Wm. Weston.

NATHANIEL WESTON LUMBER CO.

## Will Build a 100-Ton Furnace.

BIRMINGHAM, ALA., Nov. 8, 1886.

*Editor Manufacturers' Record:*

The capital stock of the Coalburg Coal & Coke Co. has been increased \$200,000, and we will build near Village creek, 1½ miles from this city, a furnace of 100 tons daily capacity, and at Coalburg, 150 additional coke ovens.

A. B. JOHNSTON, Genl. Mgr.

## Glass Works to be Erected.

ATLANTA, GA., Nov. 1, 1886.

*Editor Manufacturers' Record:*

A stock company with \$50,000 capital is being formed for the construction of glass works in Atlanta. Aug. Weyer, now superintendent of the Central Glass Co's works at Brilliant, Ohio, is to be superintendent. The stock is about all taken, and works will be in operation by 1st of February, 1887.

F. H. RICHARDSON, Secty. Mfrs. Ass'n.

BRUNSWICK, GA., Nov. 1, 1886.

*Editor Manufacturers' Record:*

There is a company forming here for the manufacture of fruit crates, with John Colville, the patentee of the crate to be manufactured, at the head.

J. J. SPEARS.

## To Build Charcoal Furnace.

DECATUR, ALA., Nov. 1, 1886.

*Editor Manufacturers' Record:*

The construction of a chemical charcoal furnace, capital stock \$150,000, will be commenced here in a few days. A company is now being organized, with every prospect of success, to build an iron furnace; also a flouring mill.

L. H. GRUBBS.

## Building Pipe Works.

SOUTH PITTSBURG, TENN., Nov. 5, 1886.

*Editor Manufacturers' Record:*

We have commenced work, and are now putting down our foundations, building tenement houses, &c., and propose to crowd work as fast as the weather will admit and material obtained. We hope to be in operation by the first of next May.

GEORGE E. DOWNING.

MONTGOMERY, ALA., Nov. 2, 1886.

*Editor Manufacturers' Record:*

We have started on a small scale, having only two hands at work. We turn out about 8 to 10 dozen brooms daily, and have market for them, and intend to double the force. We think it will turn out profitable by increasing the force and giving it proper attention.

BOYLAN & GAVAN.

## Developing a Mica Mine.

NEW CUMBERLAND, PA., Nov. 6, 1886.

*Editor Manufacturers' Record:*

We have leased a mica mine, and are now working the same, near Waynesville, N. C. L. A. Nauss is president; H. W. Linebaugh, secretary; J. Osen, treasurer, of the same, and are ready to furnish mica to the trade. The mica is of fine quality rum-colored.

KEYSTONE MICA CO.

## Will Build Street Railroad.

ATALLA, ALA., Nov. 6, 1886.

*Editor Manufacturers' Record:*

A street railroad will be built from Atalla to Gadsden. We expect to commence work by the first of December. Can you refer me to any one that has second-hand rails, from 16 to 35 pounds, for sale?

O. CHRISTOPHER.

FAYETTEVILLE, N. C., Nov. 4, 1886.

*Editor Manufacturers' Record:*

I am this week starting a tobacco manufacturing business in a small way. Should I find this enterprise successful, I will enlarge it to meet any patronage that I might be favored with.

R. M. ORRELL.

## A Big Scheme in Gas and Electric Lights.

The MANUFACTURERS' RECORD, through one of its regular contributors, Mr. D. A. Tompkins, is enabled to-day, in advance of any other journal, to present the outlines of a gigantic scheme that is being organized by Mr. Geo. Westinghouse, of Pittsburgh. Mr. Westinghouse's plan contemplates a revolution in the gas business, and so successful has he been in revolutionizing many other things that his past successes will undoubtedly give more weight to this new enterprise than if it had been undertaken by any one who had been less successful. The cheapness and popularity of gas as a fuel, for domestic as well as for manufacturing purposes, has been amply demonstrated in the natural gas regions. Natural gas, however, cannot be had in all parts of the country, but late improvements have made it possible to manufacture gas at prices that will make it cheaper as a fuel for domestic use, than coal. Mr. Westinghouse and his associates, controlling important patents for the gas and electric light business, propose to offer to every city in the country the opportunity of securing gas for fuel purposes and electric lights for all illuminating uses. It is not designed to fight the present gas companies, or to interfere with invested capital in that way, but to offer to the present gas companies the privilege of using their plant for the manufacture and distribution of fuel gas, and adding to their business electric lighting by the new inventions of Mr. Westinghouse, which so greatly reduce the cost of electric lights. The scheme contemplates one of the most extensive undertakings ever organized in the manufacturing line.

## A Tile Factory.

HAMMOND, LA., Nov. 4, 1886.

*Editor Manufacturers' Record:*

I came here September 16, from Dalton City, Ill., having made arrangements with parties in this place to start a tile factory. I have pushed things through lively, and will be in full blast inside of the next ten days. Have bought a Tiffany brick and tile mill combined.

E. C. EDMISTON.

## Machinery Wanted.

CHATTANOOGA, TENN., Nov. 5, 1886.

*Editor Manufacturers' Record:*

We will about double our capacity. In market now for new engine, new furniture planer, new tenoner, &c., &c. Will build new warehouse, 50 by 200 feet, and enlarge our furniture factory building.

RISTINE, CAMPBELL & CO.

COLUMBIA, S. C., Nov. 5, 1886.

*Editor Manufacturers' Record:*

We contemplate extending our road two miles or more.

W. D. STARLING.



### A New Texas Mill.

Since the introduction of the roller system, Texas wheat has assumed a new value. During the millstone era it was considered of little importance as a milling wheat by Texas millers because of its extreme hardness, and the large percentage of gluten and the small amount of starch it contained, making a small yield of flour to the bushel. It was this fact which largely made St. Louis such a prominent milling center, for most of the good flour used in Texas came from that city. Since adopting rolls, however, it has been found that this once de-

### Prodigious Production of Russian Petroleum.

In the Pall-Mall Gazette of late date Mr. Charles Marvin, the investigator of Russian petroleum resources, gives the following interesting facts regarding Russian petroleum:

The Russian newspapers received October 13 contain a telegram from Baku announcing the greatest outburst of oil ever known. It runs thus: "Baku, October 5.—At Tagieff's wells a fountain has commenced playing at the rate of 30,000 poods of petroleum an hour. Its height is 224 feet. In spite of its being five versts from the town, the petrole-

the well under control. The total amount of oil spouted, at the very lowest estimate, was 220,000 tons, or 55,000,000 gallons—the highest estimate put it at 500,000 tons. At a rough estimate, had the oil spouted in America, it would have realized about a million sterling, and made its owner a millionaire, instead of which the fate of the fountain at Baku was to render its master a bankrupt, for the shoals of sand engulfing neighboring buildings led to claims for damage surpassing what he got for the small quantity of oil he was able to catch and store, while the rest, flowing beyond on to other people's property, was in

### A Fine Opening for a Canning Factory.

ATLANTA, GA., Nov. 1, 1886.

*Editor Manufacturers' Record:*

There are here twenty-one wholesale grocery houses, each of which handles canned fruits and vegetables. Several of these houses do a very large business in this line. They are compelled to pay freights which amount, on an average, to twenty-five per cent. of the value of the goods.

Atlanta is in the heart of as fine a region for truck gardens as can be found. There are large quantities of vegetables lost in this vicinity every year because of the over-supply of the market and the want of a canning concern.

Last year in the magnificent orchard of Judge John D. Cunningham, thirty-five miles from this city, ten thousand bushels of fine peaches rotted on the trees, simply because there was no market for them. An inexhaustible supply of fruits and vegetables could be had here. There would be no difficulty in raising stock for a fruit and vegetable canning concern. What we want is a man of experience to come here and take charge of the enterprise. It would be desirable, of course, that he should take some stock, but the bulk of the money necessary could be raised in this city by a man who would come properly endorsed as to his experience and responsibility. One wholesale grocery house will take \$5,000 in stock, and will pledge itself to take one-half the product. Almost every wholesale grocer in Atlanta will take stock, and the patronage thus secured will be sufficient to take the entire product of a very large factory. Besides this heavy and constant local demand, Atlanta has the advantage of being the best distributing point in the South. Its eight trunk lines of railroad give it unequalled facilities for reaching the trade of Georgia and the surrounding States. Manufactures of all kinds are on the upward grade here.

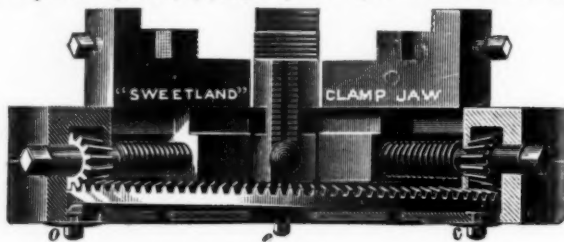
The Manufacturers' Association, organized a few months ago, is composed of 150 leading manufacturers and capitalists, who have associated with a view to encourage the manufacturing interests of the city. In the judgment of the Committee on Manufactures of this association a canned goods factory in this city would not only supply a want of its merchants, but would also offer a fine opportunity for investment.

F. H. RICHARDSON,

Sec'y Atlanta Manufacturers' Association.

### An Improvement in Chucks.

The object of this improvement is to render the chucking of wheels, pulleys, rings, etc., practical and effective, and the holding of articles of such nature perfectly firm and solid while in process of manipulation. One difficulty with chucks heretofore has been their inability to hold a pulley several inches on the face, firmly enough to turn and bore it, without the aid of clamp bolts, or



THE SWEETLAND CHUCK WITH PULLEY CLAMP JAW.

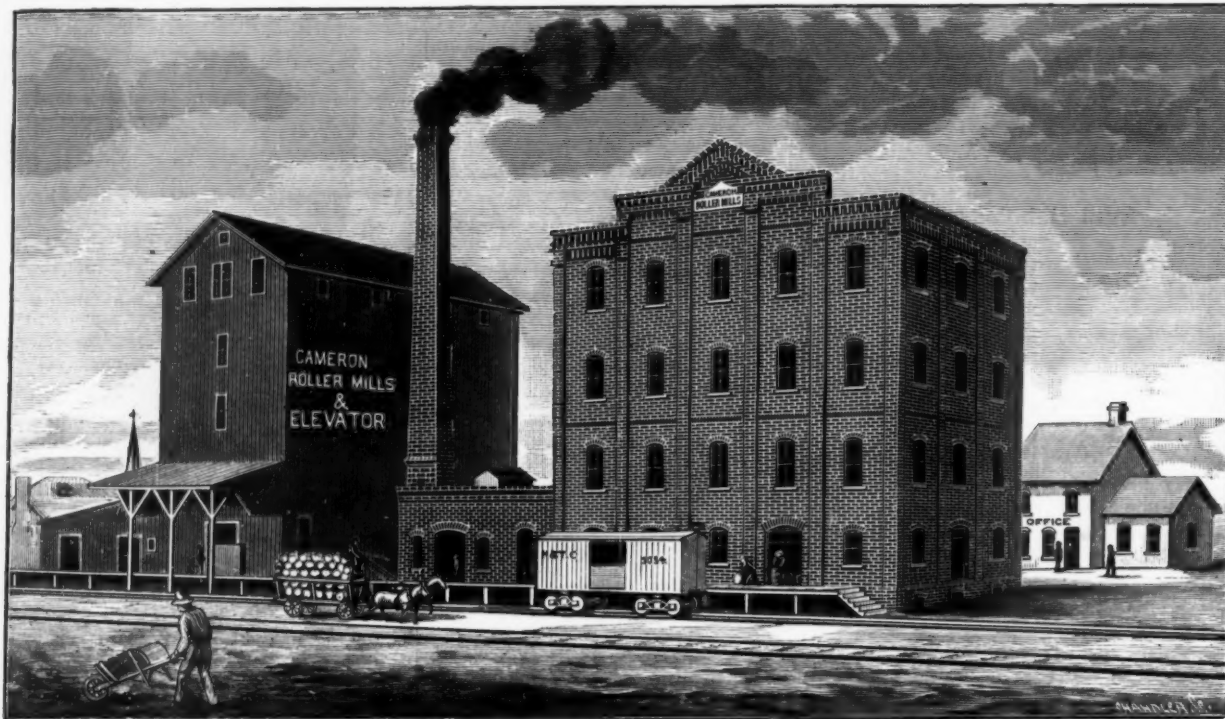
gallons, and their No. 15 well, from a depth of 595 feet, 73,000,000 gallons of oil! That is to say, a single gang of men, a score at the outside, boring for about a year, is able at Baku to bring to the surface more oil than all the mines, men and shale oil distilleries of Scotland during the same period put together. All Scotland takes a year to produce 70,000,000 gallons of crude oil. The No. 9 well of Nobel's spouted its 40,000,000 gallons in five weeks. Once the pipe line is laid down from Baku to the Black sea and begins its steady yearly yield of 160,000,000 gallons, the Scotch paraffine trade will suffer from the competition of Russia as keenly as the petroleum industry of America.

other fixtures; and consequently a great deal of time is consumed in clamping on the pulley.

With this new patented improvement, a pulley or wheel can be chucked readily, and, when secured, will stand an extraordinary amount of strain. It can be bored or turned, and a very heavy chip taken off, if necessary—without loosening.

In operating, the jaws are run out against the inside of rim of pulley, sufficient to hold it (but not enough to spring the rim out of shape), and the set screws on each jaw are then screwed down firmly on the outside of rim, thus securing it perfectly firm and rigid.

This improvement does not interfere in any way with the ordinary uses of the chuck and will be appreciated by pulley manufac-



THE CAMERON ROLLER MILL, WACO, TEXAS.

spiced wheat really makes superior flour, and to this fact is due the erection of many fine mills in the central part of Texas within the past few years. The latest of these is the Cameron Roller Mill, of Waco, Texas, shown in the engraving, which began grinding wheat about one month ago. It is owned by an incorporated company, with \$100,000 capital, composed of Wm. Cameron, a millionaire, and better known as the "Lumber King," J. C. Mansfield, late of Athens, Tenn., and J. C. Castles, a hardware merchant of Waco. Their milling plant is very extensive, having cost them \$60,000. The mill house is 45x62, with four high stories and basement, built of brick and stone, and contains the machinery necessary to produce 250 barrels of flour and 75 barrels of kiln-dried roller process cornmeal per day. Seven breaks are made on wheat, nine reductions on middlings and four reductions on corn. The machinery is driven by a large Hamilton-Corliss engine. For light the celebrated Jenney incandescent electric lamps are in use throughout the establishment. In the rear of the mill is located a 40,000-bushel elevator, built crib-work style and covered with iron siding. The H. & T. C. Railroad passes both mill and elevator. Track scales of 60,000-pounds capacity for cars, and wagon scales are provided for convenience in receiving grain. No expense has been spared in the construction of this plant, and great care has been exercised in the selection of all machinery, and especially in the flow-sheet, and since its completion those in a position to know, pronounce this the finest and most perfect mill in Texas. Next to the owners, the credit for all this is due to Nordyke & Marmion Co., of Indianapolis, Ind., who furnished and put in operation the entire outfit. The management and operation of the mill will be under J. C. Mansfield, who is not only a veteran miller, but also comes of a family who for several generations have followed this honored occupation.

um sand is pouring upon the buildings and streets." It is astonishing that the St. Petersburg correspondents of the London papers should not have telegraphed this remarkable phenomenon, and I can only account for their remissness on the grounds that they have either been too preoccupied with Bulgarian matters or have grown so accustomed to fresh oil fountains at Baku lately as to be blunted to the significance of the present one. Yet Tagieff's "gusher" beats out and out every previous record in the oil regions of the two hemispheres. The champion petroleum fountain up to now has been the "Droojba," which in 1883 spouted to the height of 200 or 300 feet, at the rate of nearly 3,300 tons of oil a day. "This single well," I wrote from the spot in that year, "is spouting more oil than all the 25,000 wells in America yield together." But the Droojba is now nowhere. Tagieff's well is spouting nearly 500 tons an hour, or more than 11,000 tons of oil a day. During the birth-throes of a Baku oil fountain, stones are hurled a terrific distance, and a high wind will carry the fine sand spouting up with the oil miles away. The roar of the gas preceding the oil-flow is terrific, and the atmosphere for a time is rendered almost unbearable. Compared with such fountains as the Droojba and Tagieff, the Great Geyser of Iceland is a pigmy. Luckily the gas soon clears off, the stones cease to rattle about the surrounding buildings, and then the fountain becomes orderly, pouring with a prodigious roar, and forming round about the 13 or 14 inch orifice vast shoals of sand, beyond which the petroleum gathers in lakes large enough sometimes to sail a yacht in. How long Tagieff's "spouter" will last, and what its ultimate yield will be, will depend upon circumstances. The Droojba lasted 115 days, flowing for 43 days at the average rate of nearly 3,400 tons a day, 31 days at 1,600 tons, 30 days at about 900 tons and 11 days at 600 tons. The owners then managed to fix a "cap" over the orifice, and placed



turers and machinery users having occasion to turn or bore pulleys, wheels, rings, etc. "The Sweetland Chuck" is the only chuck having this improved attachment, and when so furnished will be known as "the Sweetland Chuck," with the "Pulley Clamp Jaw." It is manufactured by the Hoggson & Pettis Manufacturing Co., New Haven, Conn.

### Pat. Electro-Plated Well Point.

The annexed cut shows R. R. Rouse's patent electro-plated well point of a new pattern, A showing the openings (for admitting water) before the wire cloth or perforated brass is soldered on,  $1\frac{1}{4}$  inch by  $\frac{3}{4}$  inch holes, then countersunk two-thirds of the entire surface. B shows section after wire cloth has been soldered on, and C represents it after both wire cloth and perforated brass have been soldered on. These points are electro-plated with pure block tin inside and outside before receiving the coverings, there



WELL POINT.

being no raw iron to corrode or rust to cause an unpleasant taste in the water. The electro process by which it is done is patented and exclusively owned and controlled by Mr. Rouse for driven well points in the United States. This is a new pattern, extra strong, and will stand rough use. The points of greatest importance and interest are the countersunk improvement, the greater strength and the increased capacity. The inventor, R. R. Rouse, Indianapolis, Ind., will be pleased to send circulars, price lists, etc., on application.

### Specialties in Hinges.

The Freeport Hardware Manufacturing Co., Freeport, Ill., manufacture a fine line of hardware specialties, consisting of patent spring hinges, door springs, Devore's indestructible awl, Dean's improved wire and strip stretcher, barbed wire tools, Dixon's combined padlock and hasp, patent hand trucks, etc., etc.

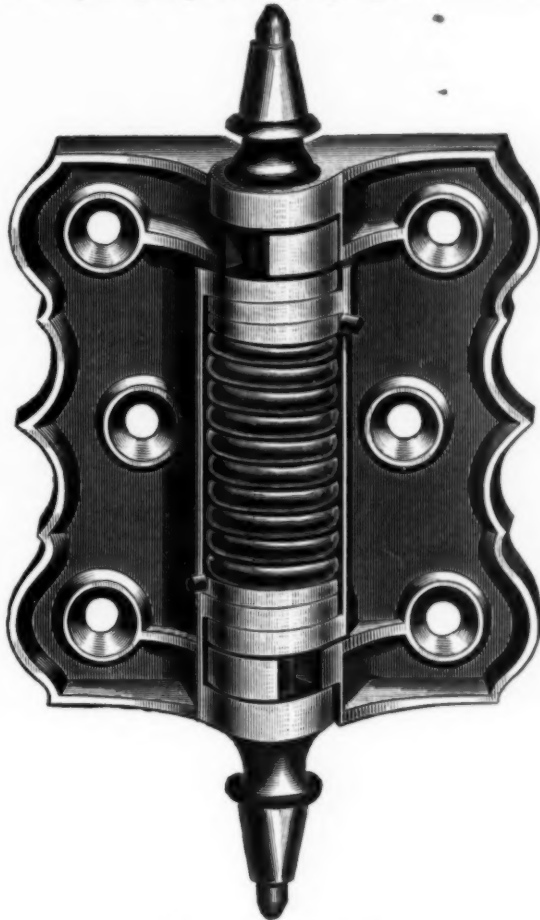
One of their recent inventions is the Wiles' Spring Hinge, which keeps a door tightly closed when shut, and holds it back securely when wide open. It is a loose-pin hinge, permitting the instant removal of the door from the casing, without the turning of a screw. It is made at a price to meet the wants of the trade, yet contains stock enough, both in the spring and castings, to render it durable and effective, and at the same time combines many valuable features

not found in any other spring hinge. They are made either right or left hand—loose pins—and every pair warranted.

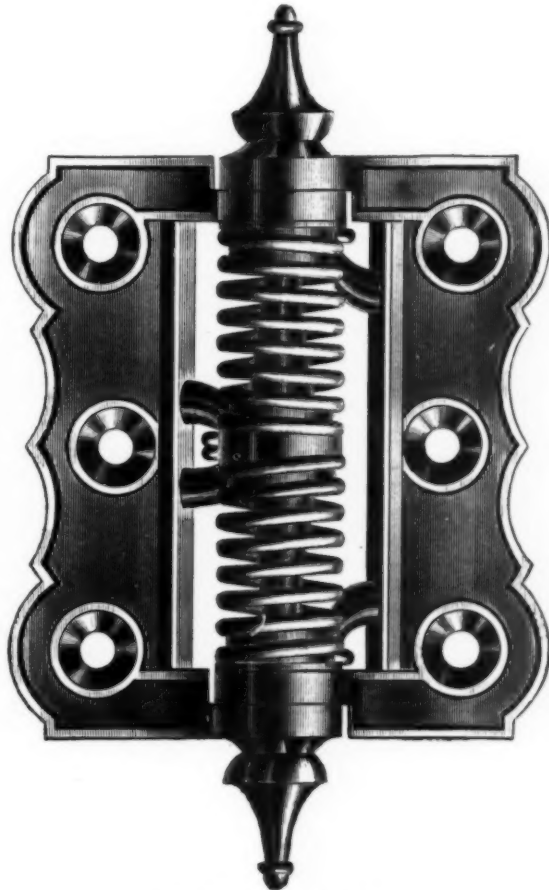
One of the standard and best of the spring hinges made by this company is the Devore spring hinge, which has uniform tension; holds the door firmly when closed, and when the door opens 130 degrees the

tains one-third more wire than is used in other hinges, allowing the application of stronger tension without danger of setting the wire. The leaves of the hinge are always in line, hence easily attached to door and jamb.

It embodies all the desirable features of a spring hinge in a combination so simple that



THE WILES SPRING HINGE.



THE DEVORE SPRING HINGE.

action of the spring reverses and holds it open.

This hinge makes but a quarter turn on the coil in opening the door to its fullest extent, admitting of the application of one-half more tension at the closing point. It requires no adjustment, the requisite tension being applied at the factory. The coil con-

it cannot get out of order, and which the manufacturers are enabled to offer to the trade at a satisfactory price. This spring hinge has been on the market for three years, and has given universal satisfaction. A handsomely illustrated and complete catalogue, containing full line of standard spring hinges and other specialties, will be sent free to the trade upon application.

### Ellison's Annual Cotton Report.

The cable brings us the results contained in Mr. Ellison's Annual Cotton Report for the year ending October 1, 1886, which was issued at Liverpool this week. We have received in addition to the figures for the present year the revised totals for last year, and they are given below; for comparison the figures for 1883-84 are likewise added. We have also had cabled Mr. Ellison's estimate of spindles and the exports of yarns and piece goods from Great Britain. The spinners' takings in actual bales and pounds for the three years, with the average weight of bales for each season, were as follows:

FROM OCTOBER 1 TO OCTOBER 1.			
For 1885-86.	Great Britain.	Continent.	Total.
Tak's by spinners, bales...	3,203,000	3,211,000	6,414,000
Av. w't of bales...	449	439	444
Takings in lbs....	1,438,151,000	1,409,813,000	2,847,964,000
For 1884-85.			
Tak's by spinners, bales...	3,085,000	2,961,000	6,046,000
Av. w't of bales...	445	433	439
Takings in lbs....	1,372,825,000	1,282,035,000	2,654,860,000
For 1883-84.			
Tak's by spinners, bales...	3,388,000	2,975,000	6,363,000
Av. w't of bales...	429	421	425
Tak's in lbs....	1,452,320,000	1,252,676,000	2,704,996,000

The totals indicate that the takings in the whole of Europe this year are 193,104,000 pounds more than in 1884-85, and 142,968,000 pounds greater than 1883-84. But while in comparison with last year Great Britain and the Continent each show an increase, the Continent alone records a gain over 1883-84, Great Britain's loss from that year being 14,169,000 pounds. In the following table we give the stock held by the mills, their takings and their consumption in each of the three years, all reduced to bales of 400 pounds:

BALES OF 400 POUNDS EACH.			
Great Britain.	1885-86.	1884-85.	1883-84.
Stock Oct. 1, (beginning of year).....	88,000	89,000	124,000
Deliveries during year...	3,595,000	3,432,000	3,631,000
Total supply for year...	3,683,000	3,521,000	3,755,000
Total consumption for year.....	3,628,000	3,433,000	3,666,000
Stock Oct. 1, (end of y'r)...	55,000	88,000	89,000
Continent.			
Stock Oct. 1, (beginning of year).....	107,000	152,000	401,000
Deliveries during year...	3,523,000	3,210,000	3,131,000
Total supply for year...	3,630,000	3,362,000	3,532,000
Consumption during year.....	3,412,000	3,255,000	3,380,000
Stock Oct. 1, (end of y'r)...	218,000	107,000	152,000

The totals for the whole of Europe for the three years are as follows (in bales of 400 lbs.):

Great Britain and Continent.	1885-86.	1884-85.	1883-84.
Stock Oct. 1,.....	195,000	241,000	325,000
Deliveries during year...	7,118,000	6,642,000	6,762,000
Total supply.....	7,313,000	6,883,000	7,087,000
Total consumption.....	7,040,000	6,688,000	7,046,000
Stock Oct. 1, (end of y'r)...	273,000	195,000	241,000

We have also received by cable Mr. Ellison's estimate of the number of spindles in Europe, America and India during 1886, and give it below, adding, for purposes of comparison, the figures for the three previous years:

Spindles.	1886.	1885.	1884.	1883.
G. Britain.....	42,700,000	41,000,000	43,000,000	42,000,000
Continent.....	22,500,000	22,750,000	22,650,000	22,500,000
U. S. ....	13,350,000	13,250,000	13,200,000	12,600,000
E. Indies.....	2,100,000	2,200,000	1,950,000	1,700,000
Total.....	81,050,000	81,200,000	81,800,000	78,800,000

Our cable gives the total spindles as 80,350,000, while, however, the details, as also furnished by the cable, result as above; mail advices will determine which is correct.

A decrease of 300,000 spindles in Great Britain is more than offset by additions at other points, so that the total of all exhibits a gain of 50,000 spindles.

Our cable further states that Mr. Ellison estimates that the American crop will reach 6,552,000 bales, which, with imports from India of 1,404,000 bales, from Egypt 442,000 bales and from other sources of 312,000 bales, would give a total supply for Europe and America of 8,710,000 bales of ordinary weights. In bales of 400 pounds each these would equal about 9,600,000 bales, and admit of some increase in consumption, both here and in Europe, without causing reduction in stocks.—Commercial and Financial Chronicle.

**NOTE**—If you wish to keep posted on the progress of the South, read the MANUFACTURERS' RECORD. Price \$3.00 a year.

## Fuel and Light.

BY D. A. TOMPKINS.

In blast furnace practice and in many other metallurgical processes gas is the common form in which much fuel is used. In connection with the blast furnace it is a by-product and is simply utilized. For heating and melting it has long been considered economical and conducive of better results to convert the fuel into the form of gas for immediate use. The Siemens regenerative gas furnace is one of the notable constructions for the use of gas fuel. Various forms of apparatus are in use, both for the production of gas and its utilization.

Probably hundreds of people who, by occupation or otherwise, have observed the very superior advantages of a gas fuel over other forms in use in the industrial arts, have been struck with what still further advantages its use for the domestic purposes of heating and cooking in private residences would be attended. It requires no genius to conceive the possibility of making it, of conducting it through the streets of cities in pipes and thence into houses to the stoves, ranges, fire-places, &c., and its utilization by combustion for heat. Think of never having ashes to carry out, nor coals to bring in, nor the dust from hearths over everything in the house, and this is far from completing the list of cares attendant upon the use of fuel in other forms than as gas. But to the mind of whomsoever conceived the idea, infinite difficulties would present themselves to be overcome,—the enormous size of the mains that would be necessary to convey the quantity that would be required for its use as an industrial or domestic fuel if attempted to be handled at low pressure; then with higher pressure and smaller pipes the dangers attendant upon its use with the appliances ordinarily to be had in the market. While the scheme would still seem feasible to a careful thinker, it would present the necessity of an extent of experiment and an accumulation of capital that would turn the scheme into a dream rather than a practical possibility.

If, for the purpose of supplying gas as a domestic fuel, the necessity had remained of conducting experiments at the same time relative to its production and distribution, it would probably have been a long time yet before we could hope for its general introduction throughout the country.

The supply of natural gas about Pittsburgh and in other sections gradually developed a system of appliances for using it, both for industrial and domestic purposes, to an extent that companies have been formed in very many localities for distributing and selling it. Since the formation of these companies and the general introduction of gas into residences for domestic use, a new and energetic interest has grown in the matter of proper and safe appliances, and the general market furnished by the natural gas regions has developed a system of appliances for the safe distribution and use of gas under sufficient pressure to put the size of pipes sufficient for its conduit for general use, within the reach of capital.

The development, in the natural gas regions, of successful and safe methods for the distribution and use of gas fuel, solves by far the most difficult problem connected with the production and distribution of a gas fuel in all cities. So nearly has such a scheme become within the reach of possibilities, that a company of capitalists has been organized in Pennsylvania to undertake the actual execution of the gigantic scheme of causing every city to be furnished with a gas fuel to take the place of all other forms.

Large as this undertaking is, it is in the hands of men who have been most prominent in the distribution and use of natural gas as a fuel, and their former successes would seem to justify, at least, the hope of a realization of good results.

As indicated in the early part of this article, the undertaking of furnishing a gas fuel for general use involves more than would at first blush appear.

With the view of disturbing the least possible present vested interests, the promoters of this gas-fuel scheme, controlling patents on a large proportion of the improved appliances used in connection with natural gas, propose to co-operate to the fullest extent possible with present existing gas companies.

Besides owning patents on a large number of appliances for the distribution and use of fuel gas, the same gentlemen have come into possession of patents on appliances for the distribution of electricity for incandescent lighting, by means of which, it is claimed, the cost of such distribution is less than 5 per cent. of the cost heretofore attendant upon the distribution of incandescent lighting currents. It is proposed to furnish these appliances also to gas companies by preference, and thereby give them the opportunity to furnish incandescent light cheaper than they can furnish gas light, and thereby have the entire gas plant to be converted into a plant to furnish fuel gas instead of illuminating gas.

The method of distributing fuel gas will be under high pressure in order that small pipes may serve, whereby the present existing illuminating gas pipes may be used to distribute the increased quantity of fuel gas.

The method of distributing electricity for incandescent lights over long circuits will be over small wires at high electro motive force, and its conversion at points of consumption by a special form of induction coil into currents of proper quantity and electro motive force for incandescent lamps.

Patents are claimed covering successful methods and appliances in connection with both the above matters. It is claimed that both the lighting and fuel supply schemes offer very many advantages over former results in the respective fields, and it is proposed to have the whole line of improvements and patents go upon the market together and in a manner to injure the least possible present existing vested interests.

The project has not yet reached a point where any predictions of it can be made, and what will come of it must remain to be seen.

Mr. Geo. Westinghouse, of Pittsburgh, is the principal promoter of the undertaking above outlined. He has been more largely instrumental than any other person in the introduction of natural gas into the domestic and industrial economy of that city.

The following points may be said to be accomplished towards the success of the scheme: 1. A system of appliances has been successfully developed for the distribution and use of gas fuel in Pittsburgh and other cities in the natural gas region, and these features are no longer experimental. 2. The desirability and popularity of gas as fuel has also been proved in the same cities. 3. Electricity for operating 1,000 lamps of 100 volts each has been transmitted over number 5 copper wire to a point 3 miles distant, and the above number of lamps have been operated at that distance from the dynamo.

It remains to produce and accumulate under pressure a water gas or other proper gas for fuel.

AUGUSTA, GA., is to be congratulated upon the termination of the long strike of the cotton mill hands, and the ending of the only serious labor dispute in the South. So far as we can judge, it was without excuse, for the mill owners were evidently doing the best in their power for their hands. With the starting up of these mills again, Augusta will show increased activity in trade and greater prosperity.

## MINING NOTES.

By T. K. BRUNER, Salisbury, N. C.

### GOLD HILL MINES.

Recently some very rich ore has been encountered in the new ground opened at Gold Hill. Prof. Crampton, the new English superintendent, feels much encouraged with the development so far. Mr. Wm. Tragillis, one of the promoters and also one of the stockholders, has been at the mines for several months, and he also is encouraged. The plan now is to seek lower down for new ground. The deep shaft is now about 800 feet, and they are still sinking. They are also sinking in other new ground, and will continue to open new ground until a sufficient amount of ore is in sight to justify starting reduction mills and amalgamators without the possible contingency of stoppage for want of pay ore. The Gold Hill Mines are the deepest and oldest in this section, and their successful working must have an encouraging influence on mining in the region. The theory is that by the present mode of treatment the mine must again take its place in the lead of the gold producers of the State. It will also demonstrate the advisability of deep mining in the South. Heretofore, but little, if any, deep mining has been conducted in the South, and to this cause has been charged many of the failures which have been chronicled. The stoppage of work in the lower levels of the Comstock has affected other deep mining on the Pacific slope, but it is not likely to influence operations in the East for some time to come, for the reason that the Eastern mines have from 1,800 to 2,500 feet to go before reaching an equal depth with the deep mines of the West. Should deep mining pay here as it has in the West, then it will be no exaggeration to say that the Virginias, Carolinas and Georgia offer an entirely new field for deep mining. For this reason the sinking of the Gold Hill Mines becomes of general interest in the South Atlantic States.

### METEORITES.

Miners and farmers frequently find what they suppose to be "native iron" or meteoric stones, and sometimes aerolites, that have been seen to fall, and as a rule no care is taken of them. They are stuck into a cranny in the wall, or made to serve as a weight to hold a door open, or otherwise disposed of in an equally useless way. In some instances farmers have been known to make horseshoes from meteoric iron, which is vandalism intensified. Any mass of silvery white color, covered with a coating or crust of black, may be considered of meteoric origin and should be preserved, and either sold or donated to some college or State collection, or to some man of science. Intrinsically, these aerolites, whether stone or iron, are only worth a few cents per pound; but collectors and men of science, who appreciate these celestial gifts to mother earth, will be glad to buy them at prices varying from one to ten dollars per pound, according to the interest attaching to the specimen. The date, hour and minute, and other historical data connected with the fall of the aerolite, adds to its value. Recently Prof. W. E. Hidden, Stony Point, N. C., found a mass in this State, which was used to keep a barn door open. The owner did not dream that the rusty mass of metal was worth \$20 cash to him, as proved to be the case.

### THE MARION BULLION COMPANY.

The affairs of the Marion Bullion Co., who are operating on a large scale in McDowell county, N. C., are in a prosperous condition. Hon. Thos. J. Edge, president, and Col. H. C. Demming, secretary and general manager, both of Harrisburg, Pa., have just returned from a trip to the mines. They have found selenite suitable for gem purposes. Selenite is sulphate of lime in crystalline form, and takes its name from a resemblance in luster to the moon. This

may be added to the already large number of gem stones found by this company. They have in their collection purple amethyst, smoky amethyst, quartz crystals, smoky quartz, enclosing asbestos filaments; quartz, enclosing actinolite, prochlorite, dolomite, chlorite and other rare minerals; emeralds, aquamarines, chrysoberyls, rutile; wine-red, almandine and pyrope garnets; opalescent and rose quartz; jasper, chalcedony, hyacinth, ruby, (limpid red zircon,) and a great many others. It is quite probable that this company may at an early day begin the manufacture of jewelry exclusively from North Carolina gold, set with North Carolina gems. Such an enterprise would be unique and should be remunerative.

### Growth of the South.

The Mobile Register, in commenting on our late editorial "Be Not Over Hasty," in which we advised the South not to go too fast in the manufacturing line, says that the "MANUFACTURERS' RECORD" appears to be somewhat alarmed at the extraordinary development of the industrial South, and sounds a genial word of warning. The Register is mistaken. The MANUFACTURERS' RECORD is doing all in its power to advance the industrial interests of the South and to encourage the building of new factories and furnaces. Instead of being alarmed at Southern progress, it rejoices in the rapid development of the manufacturing and mining interests of that section, and is vigorously working in behalf of a still greater growth of these interests. There is, however, a possibility that with this rapid growth there may come a spirit that partakes too much of the speculative tendency, and some may be induced to invest in manufactures under the "booming" process where there is not the requisite experience at the back of the enterprise, or where the facilities do not justify such an undertaking. This has been done in some cases, and large losses have resulted therefrom. Because the South has many advantages for manufactures is no guarantee that every factory, however poorly managed or badly located, is going to make money. It was with a view to suggest that, while there is still room for almost unlimited development in the South, it would be wise to exercise care and give a thorough investigation before investing in new enterprises, that the article in question was written. Don't rush blindly into everything that comes along, but investigate, and if satisfactory, then invest, is good advice for the South. There is no danger of manufacturing being overdone in the South. The field is very wide, and while new enterprises are springing up rapidly from one end of the South to the other, it will be many years before the manufactured products of that section equal in value the per capita production in Pennsylvania and New England.

ADVERTISERS wishing to reach the manufacturers of all classes, mining companies, steel, iron and hardware dealers of the entire South, cannot find a better medium than the MANUFACTURERS' RECORD.



**Anniston's Needs.**

The Watchman, of Anniston, Ala., is making vigorous efforts to secure the establishment in that town of small manufacturing enterprises. This is undoubtedly a wise move, and, if properly seconded by Anniston business men, it ought to be successful. There is probably no town in the South having greater natural advantages; its beauty, healthfulness and charming climate delight everyone who visits the place, but of late it has failed to make rapid progress like Birmingham of which it ought to be a vigorous rival, or a number of other manufacturing towns. The great iron and cotton industries of Anniston are crowded with work, and are doing well, but what is now needed is an infusion of new life, new enterprises and greater activity on the part of the merchants and others in securing manufactures.

Atlanta is a good illustration of what Southern cities can do in the way of developing their manufactures. A few years ago Atlanta was growing at an almost unprecedented rate, but then came slack times, and Atlanta halted in her growth, new factories ceased to go up as formerly, and business generally quieted down. After a while the business men of that city, becoming tired of this state of affairs, organized an association to assist in developing the city's manufactures. This association has only been in existence a short time, but it has already turned the tide, and Atlanta bids fair to take a new start. It has secured the location there of a large glass factory, for which about \$50,000 has been raised, and its secretary offers through our columns to-day all the money needed for a fruit canning factory, as soon as the proper man to undertake such an enterprise can be found.

What Atlanta has done Anniston and other Southern cities can do. If the business men of Anniston will become thoroughly alive to what their city can be made by manufactures; willing to help financially in the establishment of any good enterprise, and offer the proper encouragement of cheap land, which is all important; or even, as in many other places, a site free for any manufacturing purposes, Anniston will, we are sure, soon show a rapid growth. It is in many respects a model town, and we would rejoice to see it adding day by day new manufacturing enterprises.

**Will Rebuild Saw Mill.**

ALLEN TOWN, N. C., Nov. 8, 1886.

Editor Manufacturers' Record:

I have given my order for new machinery to rebuild my saw mill, and hope to be at work in 30 days. The Council Tool Co., of Council's Station, N. C., will be in operation by December 1st. They will manufacture a superior article of turpentine tools for the trade in Georgia, Alabama, Mississippi and Florida. S. N. FERGUSON.

**A Machine Shop.**

PALATKA, FLA., Nov. 3, 1886.

Editor Manufacturers' Record:

I have just completed a machine shop, 25 x 50 feet, to do new work and general jobbing. G. A. HOWARD.

**The Precious Metals.**

The Director of the Mint, in his annual report, says that the coinage of gold during the year amounted to \$34,077,380, against \$24,861,123 in the preceding year. The silver coinage of the year amounted to \$30,022,347, against \$28,848,959 in the preceding year. Of the coinage of the year \$29,838,905 consisted of silver dollars and the remainder of subsidiary coin. In addition to the gold and silver coinage, 1,706,651 minor coins were struck of the value of \$17,377.65. The total coinage was 38,384,622 pieces, of the value of \$64,117,105. In addition to the coinage, the value of gold and silver bars manufactured during the year amounted to \$27,268,032.

At the date of the passage of the act authorizing the coinage of the standard dollar, February 28, 1878, the London price of the silver dollar was 55 pence, equal to \$1.205 per ounce fine, at which price the intrinsic value of a silver dollar was \$0.935. At no time since has the price of silver reached 55 pence, the tendency having been steadily downward, with occasional temporary advance. During the past year the decline has been very marked. On July 1, 1885, the price of silver in London was 49 1/4 pence, British standard, equal to \$1.079 per ounce, fine, while on June 30, 1886, the price was 44 11-16 pence, equivalent to \$0.979 per ounce, fine. Since the close of the fiscal year there has been a further decline, until, on July 31, 1886, the price of silver reached 42 pence, equivalent to \$0.92 per ounce, fine, which was the lowest price ever reached. At the latter price, the bullion value of the silver dollar is \$0.712. The price has since advanced until, on October 20th, it was 45-1-16 pence, equivalent to \$0.9878 per ounce, fine. The value of the gold and silver wasted in the operative departments of the mints during the year was \$19,206.

The value of gold bullion imported into the United States during the year was \$4,073,458; exported, \$27,365,090. The import of gold coin into the United States was \$16,669,891; exported, \$15,440,917. The import of silver bullion during the year was \$4,151,438; exported, \$10,780,656, of which \$354,848 consisted of trade dollars. The director estimates the amount of United States coin in the United States July 1, 1886, to have been: Gold, \$548,320,031; silver, \$308,784,223. Totals, \$857,104,254. In addition to the coin there was gold and silver bullion in the mints and assay offices, belonging to the Government, as follows: Gold bullion, \$42,454,430; silver bullion, \$3,468,620, making the estimated stock of coin and bullion available for coinage in the United States, \$903,027,304.

In addition to the deduction of \$30,000,000 from the estimate of his predecessor of the stock of gold coin in the country made in his last report, the director has made a further deduction of \$20,324,695 for errors in early estimates, a total reduction from his predecessor's estimate of \$50,324,695. The production of gold and silver in the world during the calendar year 1885 was: Gold, \$101,580,000; silver, calculated at its coining value, nearly \$125,000,000. Notwithstanding the large depreciation in the value of silver, the production of silver in the world has steadily increased. The United States still preserves first rank among the nations of the world as the largest producer of the precious metals, its production of gold and silver, during the year, having reached the sum of \$83,400,000, or about two-fifths of the production of the whole world. The coinage of gold by the nations of the world during the calendar year amounted to about \$95,000,000, and of silver to about \$97,000,000.

The report contains a valuable fund of information acquired, through our foreign representatives, from the principal nations of the world in regard to the production, consumption and movement of the precious metals, and the standards of value and the coins of different countries.

**Benefits of the Tariff.**

Mr. H. K. Thurber writes to the New York Star regarding the benefits of protection as follows:

Referring to the correspondence relating to the tariff which you have kindly given space to, Mr. Luhrs makes up a "supposed case," and from that shows that a farmer in this country would be \$16 better off by sel-

ling his pork in Liverpool, and buying his supplies there, if he was able to bring them into this country without paying a duty of \$17.20. Now, if the "supposed case" was an actual one this would be true; but what are the actual facts? In the first place it is a well-known fact that a home consumptive market is nearly always the best one for the producer. The farmer, to sell in a foreign market, would have to reduce his net receipts by the freight paid to foreign steamship owners, the commissions both on selling his pork and buying his supplies, the heavy charges in Liverpool for dockage, storage, poundage and truckage; in fact, so many "ages" that the "net results" would probably be that his blankets, shawls and hosiery would be a very dear purchase. Now let me suppose a case. Suppose we, in this country, were large producers of pork, (as we are,) and we had to go to Germany to dispose of it, to buy our blankets, hosiery and shawls, and suppose that Germany, (as is the fact,) would not allow our pork to be admitted to their market, we would have to eat our pork, and go without our dry goods. While, on the other hand, suppose we give such inducements in the way of high wages that the German operatives would come to this country, become citizens, manufacture the dry goods in this country and sell them to the producers, in return for their products, would we not be a richer, stronger nation than if we were simply producers of raw materials and food products to send 4,000 or 5,000 miles to be consumed and manufactured, and to take in exchange manufactured articles that we could manufacture at home? Is it not a fact that one of the great reasons of our prosperity is the immigration to this country? Is it not a fact that every honest hard working artisan or laborer that comes with his family to this country to reside is a great benefit? Is it not a fact that they would not come unless they expected to better their condition? Is it not a fact that unless we had a protective tariff skilled labor would have to come in close competition with the skilled labor of Europe, which receives very much lower wages than in our own country? Is it not a fact that if it were not for our tariff our artisans would have to accept a lower rate of wages than they now receive? And is it not a fact that this last election shows more clearly than ever before that our wage earners have become fully awake to the facts? If you doubt it, go ask Mr. Morrison, of Illinois, Mr. Hurd, of Ohio, or Mr. Carlisle, of Kentucky.

**How Hawaii Hurts Us.**

We published yesterday information that the largest sugar refinery in the West, located at St. Louis, shut down Saturday night, and discharged about 125 employees, because of inability to compete with Sandwich Island raw sugar, admitted free of duty under the reciprocity treaty. We have been urging for years the repeal of this treaty, on the ground that it was injurious to us in every sense; but we never thought that its influence would be felt so sensibly as far East as the Mississippi River. The consumers on the Pacific coast have complained bitterly of it, saying that it was the instrument of a conscienceless monopoly, that it was able to choke out all opposition, and that it did not reduce the price of sugar on the coast at all. The production has steadily grown up under the fostering influence of the treaty till the importation from the islands into the United States, which, when duty was paid, only amounted to less than 18,000,000 pounds, amounted during the year ended June 30, 1886, to 192,623,175 pounds, an increase of 1,000 per cent. in ten years. This importation is mostly semi-refined large grained centrifugals, and there is not a ton of it which is the brown muscovado sugar named in the treaty. In other words, the treaty is evaded continually. It does not provide for this semi-refined article, an article which can enter at once into consumption; it was intended to cover the coarse and unrefined raw product formerly shipped to our coast from the islands. There is no end to the trickery of the millionaire beneficiaries of this ingenious treaty swindle. The government of the islands is merely their creature. The Minister of the islands at Washington is nothing less than their attorney. They are shrewd enough to keep a lobby at Washington all the year round, and have effectively prevented the repeal or modification of the treaty thus far. Not contented with the existing status, which is liable to be overturned whenever the President has had his attention called to the matter—it would be infamous to suppose that his attention could be called to it and he not act—they are working hard to have ratified a new treaty, which is no more or less than a binding engagement on our part not to disturb their reciprocity treaty for seven years. The

Treasury of the United States is the loser annually by \$5,000,000 remitted duties, which go to swell the fat purses of the millionaires who own the Hawaiian Government, plantations, and labor—for they work with labor which they have imported into the Hawaiian Islands from China, the Canaries, and other places where they could get it cheap under iron contracts, which their creature, the autonomous administration of their dominions, relentlessly force against the laborers.

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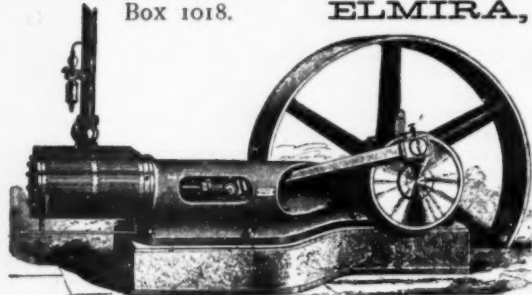
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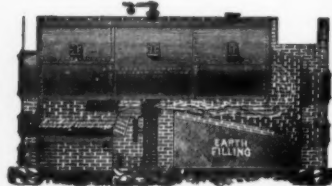
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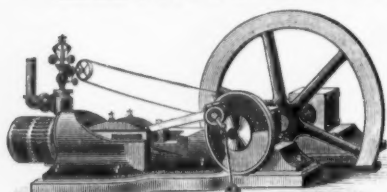
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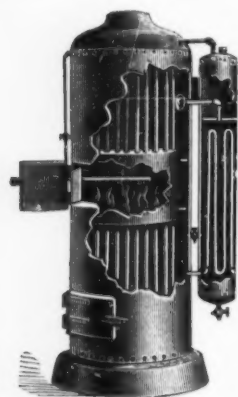
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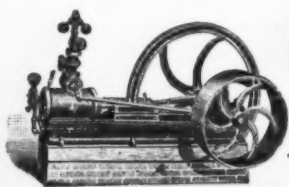
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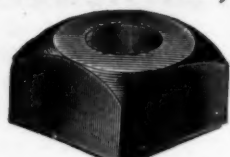
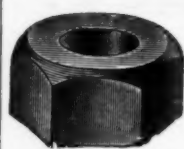


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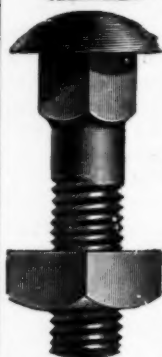
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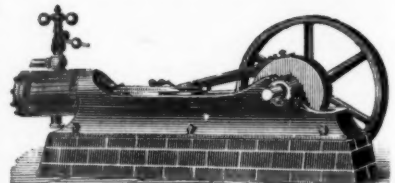
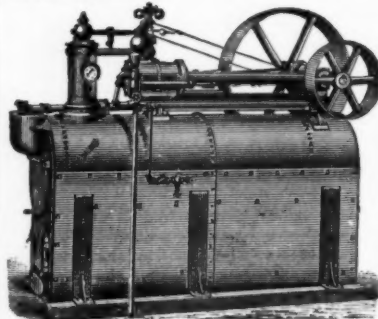
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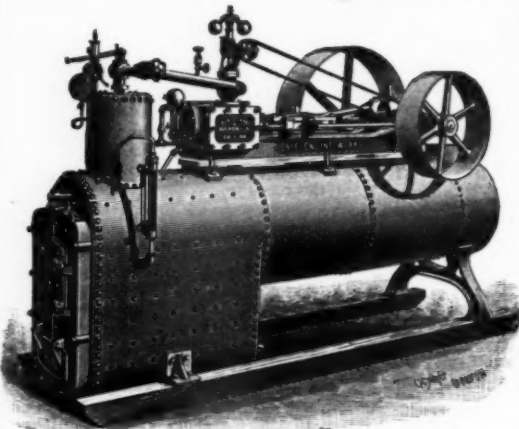
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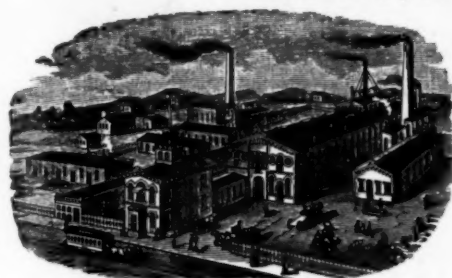


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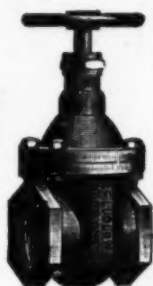
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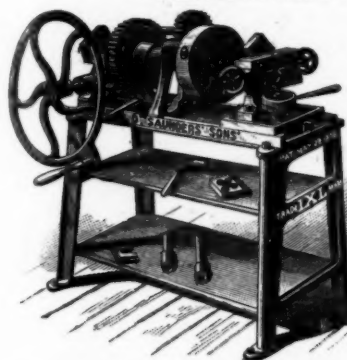
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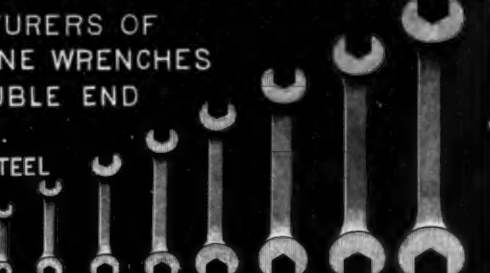


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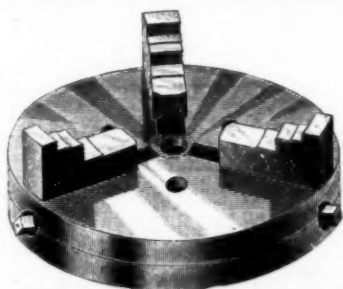
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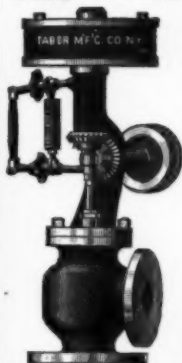
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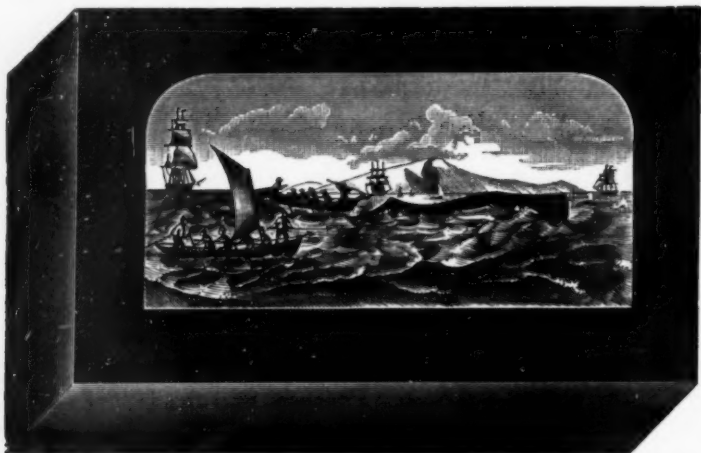
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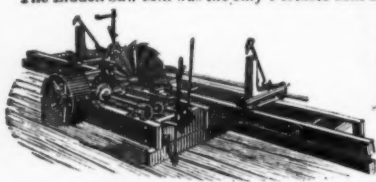
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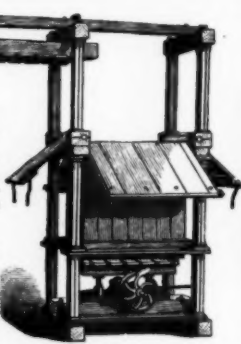
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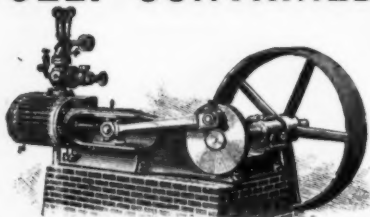
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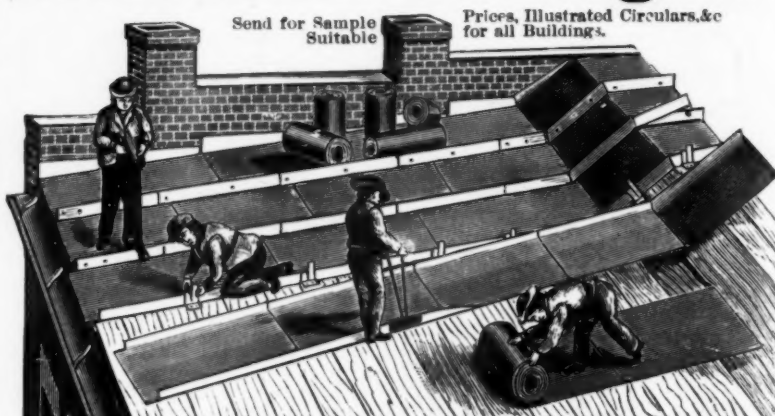
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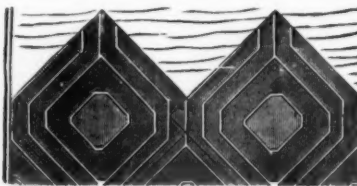
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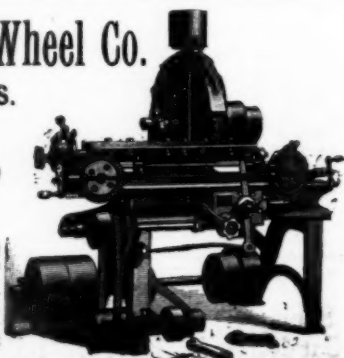
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IMPROVED AUTOMATIC KNIFE GRINDER,

Will grind a knife in one-third of the time needed on any other machine; as water prevents glazing, so Wheel cuts faster. Will stop feeding and grinding at any point. Knife can be set with edge up or down, to grind to or from the edge. Water runs on the Wheel and prevents all heating and expanding of knife while being ground, so that knife is straight when done.

We make Fifty-five styles and sizes of EMERY WHEEL GRINDERS, so we can furnish them adapted for most any class of work. One Thousand of our Grinders now in use.





# GET THE BEST.



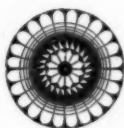
A Good Water Wheel Increases  
the Value of Your  
Whole Plant.

GET THE BEST AT FIRST AND AVOID THE  
EXPENSE AND DELAY OF CHANGING  
THE WHEELS.

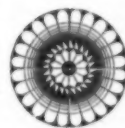
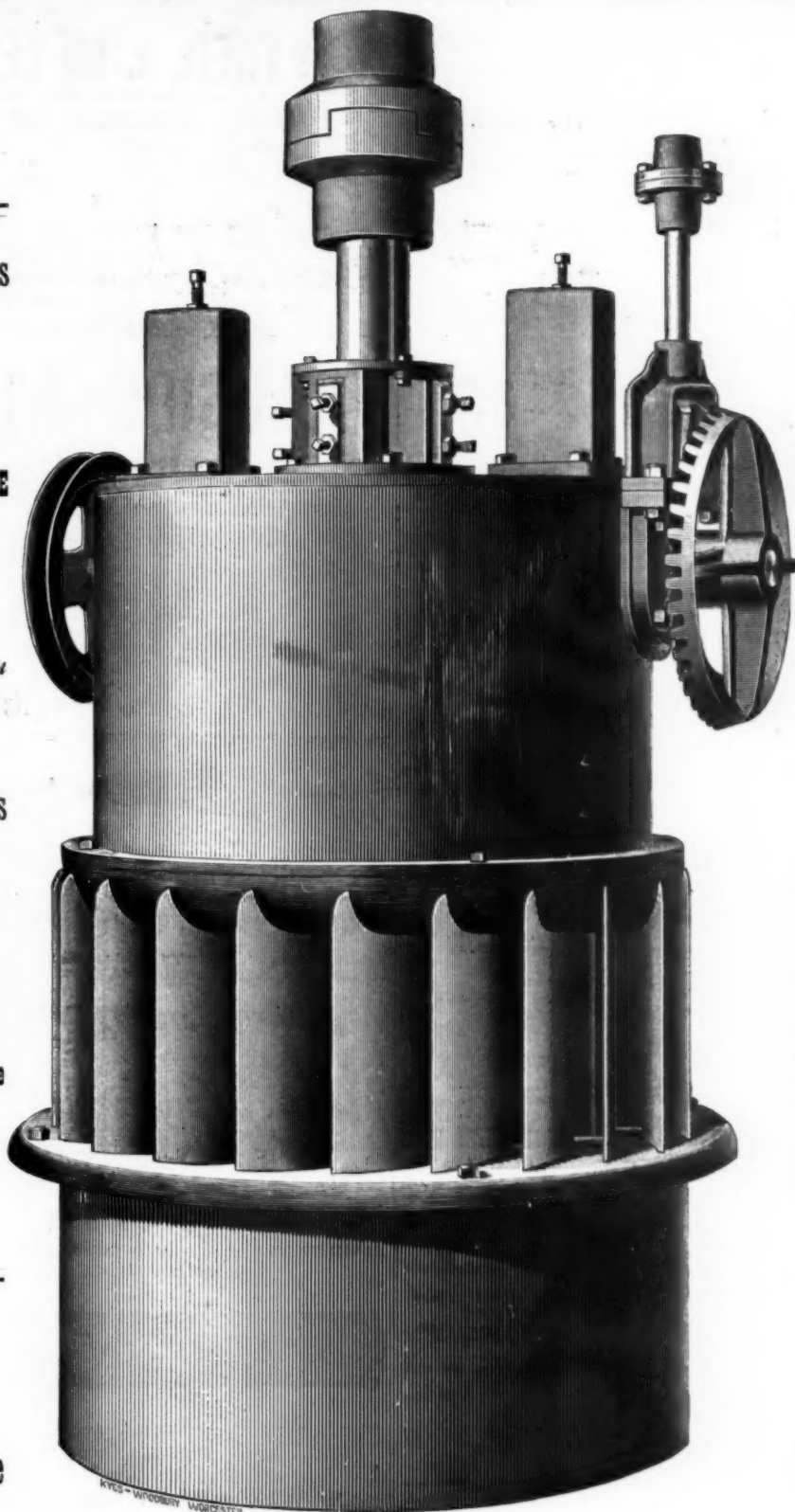
A Good Wheel Will Serve You  
Well for Twenty Years.

THE BEST IS THE CHEAPEST. IT DOES  
MORE WORK, LASTS LONGER, AND  
COSTS NO MORE FOR GEARS  
AND SETTING THAN A  
COMMON WHEEL.

The Hercules Gives the Most Power for its Size  
and the Highest Average Percentage  
from Full to One-Half Gate of  
any Wheel Ever Made.



Below we give the Names of the



When it is considered that  
the HOLYOKE WATER  
POWER COMPANY test  
every wheel that is put in in  
Holyoke, and use the wheels  
as a gauge or meter for mea-  
suring the water to the  
manufacturers and charge  
them for the actual quantity  
of water used, it will be seen  
that the HERCULES stands  
first in the estimation of  
Holyoke manufacturers as an  
economical wheel in the use  
of water for the amount of  
power produced. The HER-  
CULES, we believe, is the  
only wheel of which all the  
sizes, both right and left hand,  
have been tested, some of  
them many times, and all  
brought to the standard of  
excellence which has been  
set by the makers and de-  
manded by their customers.



Mills in Holyoke, Mass., using

## THE HERCULES WATER WHEELS

THE HEAD OF WATER ON THE WHEELS AND THE POWER FURNISHED BY THE HOLYOKE WATER POWER CO.:

Diam. in inches.	Head on Wheels.	Horse Power.	Date of Setting.	Diam. in inches.	Head on Wheels.	Horse Power.	Date of Setting.	Diam. in inches.	Head on Wheels.	Horse Power.	Date of Setting.			
Albion Paper Company.....	39	25	295	1878	Geo. R. Dickinson Paper Company...	36	19	170	1883	The Massasoit Paper Company.....	39	29	197	1883
Albion Paper Company.....	24	25	115	1883	Holyoke Water Power Company.....	30	19	115	1882	Union Paper Company.....	45	20	285	1882
Albion Paper Company.....	45	27	445	1880	Holyoke Warp Company.....	48	11	130	1879	Union Paper Company.....	30	20	195	1882
Albion Paper Company.....	30	27	200	1883	Massachusetts Screw Company.....	27	19	90	1882	Valley Paper Company.....	49	27	390	1882
Chemical Paper Company.....	4-30	23	620	1880	Merrick Thread Company.....	48	12	150	1880	Wauregan Paper Company.....	42	18	210	1879
Chemical Paper Company.....	5-18	23	275	1880	Newton Paper Company.....	48	21	350	1880	Wauregan Paper Company.....	33	18	130	1880
Chemical Paper Company.....	33	23	185	1880	Nonotuck Paper Company.....	48	20	570	1881	Whiting Paper Company.....	27	18	85	1880
Chemical Paper Company.....	42	23	305	1880	Nonotuck Paper Company.....	27	19	175	1881	Whiting Paper Company.....	18	15	30	1880
Chemical Paper Company.....	2-48	23	800	1880	Riverside Paper Company.....	48	20	325	1880	Winona Paper Company.....	48	22	340	1880
Connecticut River Pulp Company....	36	18	155	1881	Syms & Dudley Paper Company.....	45	29	495	1881	Winona Paper Company.....	24	22	135	1880
Crocker Paper Company.....	39	25	300	1883	Syms & Dudley Paper Company.....	24	29	140	1881					
Farr Alpaca Company.....	48	19	300	1878	Springfield Blanket Company.....	36	18	155	1877					
Franklin Paper Company.....	39	20	215	1883	The Beebe & Holbrook Paper Co....	24	19	75	1884					
Geo. R. Dickinson Paper Company....	2-45	19	520	1883										

Increase since..... 9,797  
Total ..... 10,576

Send for  
Catalogue  
No. 3.

**HOLYOKE MACHINE COMPANY, Worcester, Mass.**

## PAINTS, OILS, &amp;c.

PAINTS.	
Black Lamp, coach painters.....	1 lb 40c
Black Lamp, ordinary.....	1 lb 40c
Black Ivory Drop, fair.....	12@15c
Black Ivory Drop, best.....	12@15c
Black Paint, in oil.....	kegs, 6c; assorted cans, 9c
Blue Prussian, fair to best, in oil.....	35@40c
Blue Chinese, dry.....	70c
Blue Ultramarine.....	12@25c
Brown, Spanish.....	12@15c
Brown, Van Dyke.....	12@15c
Green, chrome, in oil.....	9@12@15c
Green, Paris, in oil.....	good, 25c; best, 25c
Green, Paris, in oil.....	good, 25c; best, 25c
Iron Paint, bright red.....	1 lb 15c
Iron Paint, brown.....	1 lb 15c
Iron Paint, purple.....	1 lb 3c
Iron Paint, ground in oil, bright red.....	1 lb 15c
Iron Paint, ground in oil, red.....	1 lb 5c
Iron Paint, ground in oil, brown.....	1 lb 4 1/2c
Iron Paint, ground in oil, purple.....	1 lb 6c
Linseed Oil, raw.....	44c
Single Boiled.....	46c
Double.....	48c
Mineral Paints.....	36@40c
Orange Mineral.....	10c
Red Lead, American.....	6 1/2@7c
Red Venetian, (English) dry.....	\$1.50 to \$1.75
Red Venetian, in oil.....	assorted cans, 9c; kegs, 6c
Red Indian, dry.....	8@12c
Rose Pink.....	10@13c
Sienna, American, raw.....	4c
Sienna, burnt, in oil.....	8@15c
Sienna, raw.....	8@15c
Umber, burnt, in oil.....	4@8c
Umber, burnt, in oil.....	8@14c
Umber, raw.....	3 1/2@7 1/2c
Umber, raw, in oil.....	8@14c
Vermilion, Chinese.....	90c
Vermilion, English.....	60@65c
White Lead, American, pure dry.....	15@18c
White Lead, American, pure in oil.....	7c
White, Paris, English, prime.....	in brls. 1 1/2@2c
Yellow Ochre, French.....	\$1.75
Yellow Ochre, French, in oil, ass't'd cans, 9c; kegs, 6c	
Yellow Ochre, American.....	1 1/2@1 3/4c
Yellow Chrome, in oil.....	8@18c
Zinc White, American, No. 1, dry.....	6@7c
Zinc White, American, No. 1, in oil.....	6 1/2@9c
Zinc White, French dry.....	9@12c
Zinc White, French in oil.....	10@14c

OILS.	
Bleached W. Sperm oil.....	95@100
Nat.....	95@95
B. W. Elephant oil.....	70@
" Whale oil.....	48@50
Prime Lard oil.....	55@
Extra No. 1 Lard oil.....	50@
Lubricating oils.....	70@
Miners' oil.....	35@40
W. Pressed Fish oil.....	30@32
Neatsfoot oil.....	50@75
Steam-refined Cylinder oil.....	30@40
Best Filtered.....	50@
Signal oil.....	50@
Paraffine.....	18@20

SUNDRIES.	
Benzine.....	gal., 8@10c
Turpentine.....	gal., 30c
Chalk.....	1/2c
Chalk, block.....	1/2c
Dryer patent Am'n.....	ass't'd cans, 8c; keg, 7c
Frostings.....	40c
Glue, white.....	18@36c
Glue, sheet.....	14@20c
Glue, ordinary.....	8@12c
Glaizer's Points, zinc.....	8c
Gum, Copal.....	35c
Gum, Damar.....	25c

## TIN PLATES AND METALS.

TIN PLATES.	
1C, 10X14, Charcoal.....	5 25@ 5 75
1X, 10X14, ".....	6 75@ 7 25
1C, 12X12, ".....	5 50@ 6 00
1X, 12X12, ".....	7 00@ 7 50
1C, 14X20, ".....	5 25@ 5 75
1X, 14X20, ".....	6 75@ 7 25
1XX, 14X20, ".....	8 75@
1XXX, 14X20, ".....	10 75@
1XXXX, 14X20, ".....	12 75@
1X, 20X28, ".....	14 75@
DC, 100, Plate.....	5 00@
DX, 100, ".....	6 75@
DX, 100, ".....	8 75@
DX, 100, ".....	10 75@
IC, 10X14 & 14X20, Extra Charcoal.....	6 00@ 6 25
IC, 10X14 & 14X20, ".....	PP. 6 50@ 7 00
1X, 10X14 & 14X20, ".....	7 75@ 8 50
1X, 10X14 & 14X20, ".....	PP. 8 50@ 9 00

ROOFING PLATES.	
IC, 14X20, Charcoal Terne.....	4 50@ 4 75
1X, 14X20, ".....	6 00@
IC, 20X28, ".....	9 00@ 9 50
1X, 20X28, ".....	12 00@
IC, 20X28, Extra fine quality, charcoal roofing, genuine "old style" redipped.....	13 00@
1X, 20X28, ".....	17 00@

COKE PLATES.	
C, 10X14, bright, "B. V." grade.....	4 75@ 5 00
C, 14X20, ".....	4 75@ 5 00
C, 10X20, Gutters.....	7 50@

BLOCK TIN.	
Pig Tin.....	23
Bar Tin.....	26

LEAD.	
Pig.....	5 1/2
Bar, (15 oz. bars).....	6 1/2
Sheet.....	8
Pipe, full coils.....	7

TINNERS' SOLDER.	
No. 1 Refined.....	13
Market Half-and-Half.....	14 1/2
Strictly Half-and-Half.....	15

BABBITT METAL.	
A. 1.....	15
No. 1 Ordinary.....	10
Antimony.....	18
Excelsior Babbitt Metal, No. 2.....	10
" " ".....	9

SHEET ZINC.	
In casks of 600 lbs., 1/2 lb. advance.....	5 1/2
In smaller quantities, 1/2 lb. advance.....	6 1/2

COPPER.	
Braziers' ordinary sizes, 16 oz. 1/2 lb. sq. ft. and heavy, including sheathing size.....	17 cts. 1/2 lb.
Braziers' ordinary sizes, under 16 oz. and over 12 oz. 1/2 lb. sq. ft.....	18 " "
All sheets, 10 and 12 oz. 1/2 lb. sq. ft.....	20 " "
" " under 10 " " ".....	23 " "

Circles, 60 in. diameter and less, three cts. 1/2 lb. advance over lowest prices of Sheet Copper of the same thickness.

Circles, over 60 in. diameter, up to 66 in. diameter inclusive, five cts. 1/2 lb. advance over lowest prices of Sheet Copper of the same thickness.

Circles, over 66 in. diameter, six cts. 1/2 lb. advance over lowest prices of Sheet Copper of the same thickness.

Segment and Pattern Sheets, three cts. 1/2 lb. advance over prices of sheets required to cut them from.

Cold or Hard Rolled Copper, 14 oz. per square foot and heavier, one ct. 1/2 lb. over the foregoing prices.

Cold or Hard Rolled Copper, lighter than 14 oz. per square foot, two cents per pound over the foregoing prices.

## BRASS.

ROLL AND SHEET BRASS.  
Brown & Sharpe's Gauge the Standard.  
New List, Jan. 17, 1884.  
Dis 30@30 1/2 5

## COMMON HIGH BRASS.

Wider than	10	12	14	16	18
and including.	10	12	14	16	18
To No. 20, inclusive.....	.21	.23	.25	.27	.29
Nos. 21, 22, 23 and 24.....	.22	.23	.24	.26	.28
Nos. 25 and 26.....	.23 1/2	.24 1/2	.25 1/2	.27	.29
Nos. 27 and 28.....	.23	.24	.25	.28	.30
Add 9 cts. 1/2 lb. for sheets cut to particular widths and lengths.					
Add 1/2 c. 1/2 lb. additional on each number thinner than Nos. 28 to 38 inclusive.					
Brass thinner than No. 38 is Platers' Brass.					
Printers' rules.....					55 cts.
Printers' Sheets and Plates cut to particular sizes and lengths to No. 20, inclusive.....					45 cts.
Brazing, Spinning and Spring Brass, one cent more than common High Brass.					
Low Brass four cts. 1/2 lb. more than common High Brass.					
Gilding, Oreide and Bronze seven cts. 1/2 lb. more than common High Brass.					

## SLITTING METAL.

Add to list as follows:	
Over 1/2 in. to 1 in., inclusive, Nos. 12 to 20, inclusive.....	1 1/2c.
Over 1/2 in. to 1/4 in., inclusive, Nos. 12 to 20, inclusive.....	1
1/2 in. and narrower, not less than.....	4
Over 1/2 in. to 1 in., inclusive, Nos. 21 to 28 inclusive.....	2
Over 1/2 in. to 1/4 in., inclusive, Nos. 21 to 28, inclusive.....	2
1/2 in. and narrower, Nos. 21 to 28, inclusive, not less than.....	6
Over 1/2 in. to 1 in., inclusive, Nos. 29 to 32, inclusive.....	1 1/2
Over 1/2 in. to 1/4 in., inclusive, Nos. 29 to 32, inclusive.....	3
1/2 in. and narrower, Nos. 29 to 32, inclusive, not less than.....	12
Over 1/2 in. to 1 in., inclusive, No. 33 and thinner.....	3
Over 1/2 in. to 1/4 in., inclusive, No. 33 and thinner.....	6
1/2 in. and narrower, No. 33 and thinner, not less than.....	18
Slit Metal cut to particular lengths, 1/2 lb. additional.....	5

## PLATERS' OR GOLD METAL.

In bars.....	40c.
In ingots.....	45c.
In ingots, planed or polished.....	46c.

## BRASS TUBING.

Brown & Sharpe's Gauge the Standard for all Tubing.	
	Per lb.
Plain, to No. 20, inclusive.....	
Above 5-16 inch to 3 inches, inclusive.....	35
Plain, to No. 21, above 3 inches.....	45
" 5-16 inch to No. 20.....	45
" 3/4 inch.....	1.00
" 1/2 inch.....	1.50
Bronze Tubing 3 cents per pound more than Brass.	
Nos. 21, 22, 23, two cents advance on list for each number.	
Nos. 24, 25, 26, four cents advance on list for each number.	
Above No. 26, special rates.	
All Mandrel-drawn Tubes, 1/4 inch and above, five cents advance on list prices.	
All Mandrel-drawn Tubes under 1/4 inch, twenty-five cents per pound advance on list prices.	
Fancy Tubing to No. 20.....	40-43
English, Scotch and Extra Pattern Fancy Tubing to No. 20.....	48
Tubing sawed or cut, 2 to 4 feet long, one cent advance on list.	
Add to one cent one-half cent for each additional cutting under two feet.	

## WIRE IN COILS.

Old English gauge the Standard.

	Common High Brass.	Low Brass.	Gilding, Bronze and Copper.
All Nos. to No. 16, inclusive.....	.22	.26	.30
Nos. 17 and 18.....	.23	.27	.31
" 19 and 20.....	.24	.28	.32
" 21.....	.25	.29	.33
" 22.....	.26	.30	.34
" 23.....	.28	.32	.36
" 24.....	.30	.34	.38
" 25.....	.32	.36	.40
" 26.....	.35	.39	.43
" 27.....	.38	.42	.46
" 28.....	.42	.46	.51
" 29.....	.45	.49	.54
" 30.....	.48	.52	.59
" 31.....	.51	.55	.67
" 32.....	.55	.59	.73
" 33.....	.59	.63	.82
" 34.....	.64	.74	.95
" 35.....	.70	.80	1.30
" 36.....	.76	.86	1.30
" 37.....	1.00	1.04	1.70
" 38.....	1.30	1.34	2.00
" 39.....	2.00	2.00	3.25
" 40.....	2.60	2.60	5.75

Spring Wire, 2 cts. 1/2 lb. advance.

Whitened Wire, 3 cts. 1/2 lb. advance.

Flat, Square and Half-round Wire 4 cts. advance on Round Wire.

Fancy Wire not less than 10 cts. advance on Round Wire.

Spooling on one-pound spools 12 cts. 1/2 lb. extra.

Spooling on ten-pound spools or more, 2 cts. 1/2 lb. extra.

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**THE FRED. J. MEYERS MFG. CO.**  
COVINGTON, KY., Manufacturers of  
**WIRE GOODS OF ALL KINDS,**  
Wrought-iron Fencing, Cresting and Hardware Specialties.  
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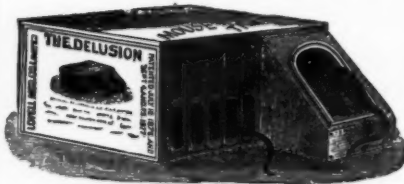





## DELUSION MOUSE TRAP

—52,932 Sold in One Month.—

**THE ONLY SUCCESSFUL Self-Setting TRAP.**



"The mouse goes in to get the bait And shuts the door with his own weight, And then he jumps right through a hole And thinks he's out; but, bless his soul, He's in cage, somehow or other, And sets the trap to catch another."

**LOVELL MANUFACTURING CO., it Limer, ERIE, PA.**

**Covert Manuf'g Company**  
WEST TROY, N. Y.



Manufacturers of COVERT'S Celebrated Harness Snaps, Swivel Snaps, Open Eye Bit and Chain Snaps, Snap and Thimble for Horse and Cattle Ties; ROPE GOODS, consisting of Web and Rope, Halters, Rope Horse and Cattle Ties, Web Horse Ties, Halter Leads, Driving Reins, Weight Cords, Hammock Ropes, Hitching Cords, Lariat Tethers and Picket Pins.

Also, Leather Horse Ties, Etc. Breast Chains, Heel Chains, Chain Cow Ties, Halter Chains, Martingale Chains, Rein Chains, Post Chains, Butt Chains, Back or Cart Chains, Log Chains, Stake Chains, Trace Chains. ALSO STUD, CABLE AND CABLE CHAIN. CHAINS OF ALL KINDS MADE FROM SAMPLE OR DRAWING.

**PATENT ADJUSTABLE SOLDERING IRONS.**

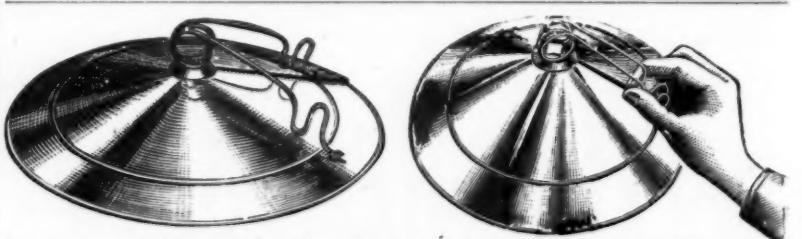
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## CHATTANOOGA FOUNDRY &amp; PIPE WORKS.

DAVID GILES, Pres. C. B. IBESTER, Vice-Prest. M. LLEWELLYN, Secy. and Treas.  
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**CAST IRON GAS & WATER PIPE**

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One 10 and one 12 inch cover will fit tight every sized opening from 8 to 12 inches. **The Best Selling Article of Hardware Ever Offered.** For prices address,  
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MANUFACTURERS OF THE  
**CRONK'S PATENT**  
**Wire Cutter, Bender and Plier and Hog Ringer Combined.**  
Specially adapted for use on Wire Fences; also best in the world for TINNERS' use. Patent Allowed.



## Literary Notes.

THE PANSY is an illustrated monthly containing thirty-two to forty pages each number of enjoyable and helpful literature and pictures, equally suited to Sundays and week days. The editor "Pansy" will furnish a new serial to run through the year entitled, "Monteagle." The Golden Text Stories will be continued under the title of "A Dozen of Them." Margaret Sidney will contribute a serial called "The Little Red Shop," telling how Jack and Cornelius and Rosalie earned money to help mother take care of the baby. There will be more "Great Men," and more "Remarkable Women." Fay Huntington will write of flowers and plants in "Mrs. Brown's Botany Class." Rev. C. M. Livingston will furnish stories of Great events, People, Discoveries, Inventions, etc. A novel feature will be a story by eleven different authors. R. M. Alden will direct a new department of Church, Sabbath school and Missionary news. The present departments will continue and new ones be opened. Pansy is only \$1.00 a year, and specimens will be sent free to intending subscribers. D. Lothrop & Co., Publishers, Boston.

SIR WALTER SCOTT'S "Christmas in the Olden Time" has been chosen as the text for six and twenty illustrations by E. H. Garrett, Harry Fenn, J. Steeple Davis, Geo. A. Teel, Henry Sandham, Childe Hassam and H. P. Barnes, engraved under the supervision of Geo. T. Andrews, for Cassell & Co. to publish. The book has a genuine Christmas flavor; we hear the big logs crackling on the hearth, and smell the savory plum-pudding as we turn the leaves of this attractive volume.

EVERY person sending \$2.50 now will receive Good Housekeeping from November 13, 1886—the commencement of the new serial, "Progressive Housekeeping," which gives a daily programme of work, something never before attempted in print—to January 1, 1888, and Catherine Owen's admirable book of 300 pages, "Ten Dollars Enough, or How to Keep House and Live Well on Ten Dollars a Week." Good Housekeeping is published every other week at Holyoke, Mass., with a branch office at 239 Broadway, New York.

A PLUCKY ONE. By Mrs. George E. Spencer. New York: Cassell & Co.

A novel of the better sort such as Messrs. Cassell & Co. have been recently publishing. The plot is good, the interest well sustained throughout, and the general character of the book such as to give it a high place among the fiction of the day. It will find a wide circle of appreciative readers.

AMONG recent additions to juvenile literature a book deserving special mention is "Baby World," published by the Century Co., New York. It is edited by Mary Mapes Dodge, and is made up of pictures, poems and stories from the Little Folks' Department of that splendid child's magazine, St. Nicholas. It will prove an unfailing source of delight to the little ones, and an inestimable aid to mothers in their entertainment. It is a book of 300 pages, handsomely printed on heavy plate paper. The price is \$1, bound in illuminated boards, and \$1.25 in cloth.

## TRADE NOTES.

## The Charlestown Gas and Electric Light Company.

The Charlestown Gas and Electric Light Company is successfully running its electric light plant. Its steam plant was erected by the Jarvis Engineering Company, Boston, and consists of a six-foot tubular boiler set with the Jarvis patent boiler setting, and an Armington & Sims Company engine. This

is connected with the dynamos direct by belting, thus saving the loss of power required to run shafting. The exhaust is run through a National feed water heater that raises the temperature of the water to 210° F. The fuel used is what is called breeze or coke screenings. The fuel is thoroughly wet before firing, taken about 40 per cent. of moisture. In the process of burning, the moisture in the coke is converted into hydrogen gas, the boiler furnace is so arranged that hot air (oxygen) is delivered on top of the fire, this uniting with the hydrogen gas from the moist coke making a hydro-oxygen or compound blow-pipe flame, the hottest flame known to science, and the result is the boiler furnace is filled with a volume of gas flame, using fuel that is supposed to have all the gas taken out of it, in the retorts. When this class of fuel is sold it generally brings about \$1 a ton. Taking it on this basis it costs the Charlestown Gas Company about \$1.50 a night for fuel to run all night fifty full arc lamps.

MESSRS. GOODELL & WATERS, Philadelphia, are placing a great many of their "Keystone" Rapid Feed Flooring Machines in the South. They say that, judging from the present outlook, their trade in the Southern States for the coming year will be very large.

## List of Patents.

The following Patents were granted to citizens of the Southern States, bearing date Nov. 2, 1886. Reported expressly for this paper by Louis Bagger & Co., Mechanical Experts and Solicitors of Patents, Washington, D. C.

Bardon, Prosper, Waco, Texas. Means for effecting upward draft in privies, commodes, &c.	351,731
Bennett, Edwin, Baltimore, Md. Roofing-tile.	351,956
Brooks, W. D., Baltimore, Md. Can-soldering machine.	352,034
Bullock, H. P., and H. P. Cayce, Jonesborough, Texas. Gate.	352,080
Conacher, Alexander, Augusta, Ga. Refrigerating-machine.	352,041
Crary, J. W., Bluff Springs, Fla. Incased pile.	352,045
Custer, George, Whitney, Texas. File.	352,083
Ferguson, G. J., Greenville, Texas. Car-coupling.	351,756
Grasberger, B. A., Richmond, Va. Wheel-hub.	351,910
Greer, J. W., Austin, Texas. Fare-box.	351,911
Guerrant, P. M., Danville, Va. Tobacco-press.	352,052
Hare, J. R., Baltimore, Md. Watch pendant bow.	351,979
Henry, John, Louisville, Ky. Tricycle.	351,768
Jones, G. W., and F. F. Green, Comanche, Texas. Hub.	351,776
Matthews, H. W., Baltimore, Md. Corn and cane harvester.	351,877
Matthews, H. W., Baltimore, Md. Cutting apparatus for corn and cane harvesters.	351,878
McCord, A. J., Louisville, Ky. Hame-fastener.	351,788
Patterson, J. W., Madisonville, Ky. Vehicle spring.	352,065
Rockwell, E. D., Jacksonville, Fla. Sash-fastener.	352,099
Shelton, J. K. P., Gaston, Ala. Cotton chopper and cultivator (4 patents).	351,845
Snyder, J. J., Nashville, Tenn. Boot or shoe.	351,889
Thau, Franz, Baltimore, Md. Gate for vats.	352,073
Woodward, W. M., Sumterville, Fla. Spring motor.	351,894
Zanetti, F. C., Bryan, Texas. Carriage top.	352,025

## PATENTS FOR INVENTIONS

(American and Foreign.) Trade Marks, etc., procured through the agency of

Arthur C. Fraser & Co.

TEMPLE COURT, NEW YORK CITY.

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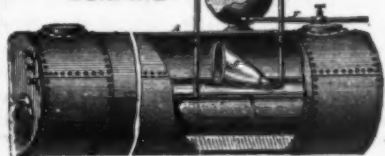
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Wood Engraving,  
Electrotyping  
and Printing.

Publishers of The Manufacturers' Exchange.

A. MUGFORD, Hartford, Conn.

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## HOW TO KEEP BOILERS CLEAN



Hotchkiss Mechanical Boiler Cleaner, Illustrated in an eighty-eight page book, which will be mailed FREE, to any address, by JAS I. HOTCHKISS, 98 JOHN ST., N. Y. Beware of Infringers.

BEAUDRY'S UPRIGHT CUSHIONED Power Hammer, BY FAR THE BEST! Blow accurate, powerful and elastic. Will increase the profits of any shop. 70 Kilby St., BOSTON, MASS. Beaudry & Cunningham.

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Syracuse Twist Drill Co. SYRACUSE, N. Y.

## Cannon Chucking Reamers.



These Reamers will remove more stock than any other. They only require a hole large enough to carry away the chips, as they will cut to the center, and make a perfect hole.

They keep their size better than any other. As they cut only upon the end, there is no tendency to wear below size.

They will not turn aside for hard or soft spots, nor for holes.

Send for Prices and Catalogue.

## VALUABLE COAL &amp; IRON Lands For Sale.

Fifty thousand acres of carefully selected coal lands, located in the Black Warrior river coal fields of Alabama, beginning about 8 miles from Tuscaloosa, on both sides of the Black Warrior river, which is now navigable from Tuscaloosa to Mobile, and which the U. S. government is now engaged in making navigable to and above these lands. Valuable veins of iron ore have been found on these lands. The Georgia Pacific Railroad is now being built to run through the lands, and the new Memphis & Birmingham is being built skirting them.

The coal is of excellent quality, and in good workable seams.

The lands are well timbered with yellow pine, oak, hickory, &c.

These lands are conceded to be among the best in the State, and are offered at a price that makes them very desirable, either for development or investment. The owners will sell a controlling interest, but wish to retain at least a fourth interest.

For further information, maps, &c., call on or address  
GEO. E. RIGHTER,  
Office of the Griffin Manufacturing Company,  
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## NORTHERN and ENGLISH MARKETS

## Southern Real Estate

Agricultural, Timber, Grazing and Mineral Lands; also Manufacturing Properties.

CLARENCE GORDON,  
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This business furnishes favorable opportunity to Southern Sellers, whilst it brings reliable investment to Capitalists by a system that refuses to handle property that will not submit to examination and report by experts of this office; thus providing in the best markets full, skilled and guaranteed description of distant offerings. Expert examiners at various Southern points. Circulars on application. Correspondence invited.

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## Wanted

To sell a one-set woolen mill; good two story frame house, 36x75, 18 feet full; plenty of water; a full set of machinery; now running. Also one other power on same stream and in sight of mill; frame house; no machinery; one good dwelling and a much land as wanted with each power; will sell separate or all together, as desired, and will positively give the best bargain ever offered. Write and see for yourself to

H. M. & SON,  
Care MANUFACTURERS' RECORD.

## \$10,000 Bonus for a Mill.

The citizens of the town of Santa Anna, Coleman county, Texas, offer a bonus of \$10,000 for the erection and completion of a Roller Flour Mill of 200 barrel capacity, with corn burr attachment, accompanied with banking facilities, or ample capital to run the mill. Correspondence solicited. Address

S. C. SPANN,  
Cor. Secty., Santa Anna, Coleman Co., Texas.

## FOR SALE.

Town site and large body of land at Reagan's Station, E. T. Va. & Ga. R. R.; or partner wanted to improve. Fine climate, soil, water and timber, and splendid chance for business, colonization, &c. Address

LENOIR REACAN,  
P. O. Box 19. Sweetwater, East Tennessee.

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## IN NORTH CAROLINA.

Sixty acres of fine tobacco land with splendid two story house and beautiful yard, fronting about 350 feet on the main street, in a town of 150 to 175 population, 15 miles from a city of 15,000 inhabitants and one of 5,000. The house is 300 yards from depot. There is a large stable, carriage house, corn crib and other out-houses, including 3 tobacco barns and 2 tenant houses. Good well o' freestone water; 400 peach and apple trees, and 400 grape vines, all in full bearing. Splendid climate; healthy location. The buildings alone cost \$3,500. Will take \$2,500 cash. Special reasons for selling. Address J. F. R., care MANUFACTURERS' RECORD, Baltimore.



Circulars free. N. C. BAUGHMAN, York, Pa.  
Please mention this paper when you write.



## Business Chances.

**For the purpose of making the MANUFACTURERS' RECORD a still more valuable medium of communication between its readers North and South, we will publish, FREE OF CHARGE, short advertisements, not exceeding 40 words, from those in the South who have good business openings that they wish to bring to public notice, capital wanted for industrial enterprises, &c., &c.; while readers in other sections who desire to engage in manufactures at the South are also invited to use these columns, without cost, either in seeking information regarding the advantages and special claims of different localities, or for asking about good openings for men and money. This department is also free for Southern manufacturers who wish to advertise for mill managers, superintendents, engineers, &c.**

**In corresponding with any of these advertisers please mention the Baltimore Manufacturers' Record.**

**Parties advertising in this column must have replies sent to their own address, and not to care of Manufacturers' Record, unless stamps are sent for forwarding replies. Advertisements sent not in accordance with this requirement will not be inserted.**

**INFORMATION WANTED** as to eligible location in the South for the establishment of a machine repair shop. Address J. A. S., care MANUFACTURERS' RECORD.

**A PRACTICAL FURNITURE MAKER** can get an interest in a nice furniture factory located in the healthy town of Athens, East Tennessee, on most favorable terms, as the owner is engaged in other business. But small amount of capital needed. For particulars address J. C. Mansfield, Waco, Texas.

**A HANDSOME HOTEL** at Southern Pines, the coming winter resort of the South, will be completed by the first day of December. A hotel man of experience desiring to rent a house for the winter is requested to correspond with P. Pond, Southern Pines, Moore county, N. C.

**PERSONS** desiring good homes, cheap farms, valuable milling property, will find it to their advantage to address the undersigned. Send for real estate journal. Berkely & Watkins, real estate agents, Farmville, Va.

**GRAND NEWSPAPER OPENING.**—The Morrilton Headlight, the best country paper in Arkansas, and in the liveliest town in the State, is offered for sale at a bargain, on account of proprietor desiring to go into metropolitan journalism. Those meaning business, address Robt. W. Leigh, Morrilton, Ark.

**WANTED.**—A thorough practical brass moulder, with small capital, to join me in a brass foundry at Chattanooga, (none in the city.) I have the location, buildings, machinery, engine and tools, and am a thorough mechanic unencumbered. Address John A. Lee, 214 Boyce street, Chattanooga.

**OFFICE MAN WANTED.**—A man who understands and has sold machinery, pipe fittings, brass goods, &c., and who is also a competent book-keeper and correspondent, can secure a permanent position. Must be a man of experience, good habits, and with satisfactory reference. Address J. S. Schofield & Son, Macon, Ga.

**WANTED.**—Some enterprising company to manufacture and sell patent anti friction cutting apparatus for mowers and reapers. Can be made and attached to new machines or any second-hand machine now in use. For particulars and description address J. C. V., Box 289, El Paso, Texas.

**9,000 ACRES** of timber land, 13 miles long, title perfect, price \$1 per acre. For particulars address, F. J. Chapman, Salem, Va.

**WANTED.**—By a practical pressed brick maker, capital to manufacture brick in the South. Best place in the United States; brick sell at \$7.00 to \$8.00 per M. No limit to demand. C. B. Chase, Sheffield, Ala.

**FOR RENT.**—Furniture, sash and door factory, at Spartanburg, S. C. Brick building, 50x100 feet, 30 horse-power boiler and engine, shafting, machinery, dry kiln, &c. Will rent cheap for three to five years. Address, A. Armstrong, Spartanburg, S. C.

**WANTED.**—Information as to where we can locate a paper and stationery store to advantage in the South. Massiot Paper Co., Covington, Ky.

**WANTED.**—The address of dealers in sheep, elk, deer and other skins. Address, J. L. Sheppard, Charleston, S. C.

**FOR SALE.**—Sawing, planing and grist mill driven by 18-horse-power Frick engine; a splendid trade established; convenient to railroad and water; thriving town; good site for factory of any kind; plenty of room. Apply to Thomas A. Ogden, Middletown, Frederick Co., Va.

**WANTED.**—\$10,000 to patent and manufacture a combined cotton thinner and cultivator, two cultivators, a sugar-cane cutter, a cotton press and a wagon axle—all good devices. A half interest will be given. W. C. Bibb, Atlanta, Ga.

**A RARE OPPORTUNITY.**—Wanted.—A good business man, mechanic or otherwise, with energy and push, and from \$20,000 to \$25,000 capital, to purchase a half interest in a thriving and prosperous machine works in one of the most important cities in the South. Capital wanted to increase business, having been obliged to decline more contracts during the year than were accepted. No competition in this particular line south of Chicago. Apply to BALTIMORE MANUFACTURERS' RECORD.

**WANTED.**—Capital to build the Dennis Cotton Worm and Insect Destroyer—patent just allowed—or will sell the patent. It will kill the insects on all farm crops, and at the rate of 20 to 40 acres per day. Address, W. J. Dennis, Augusta, Ga.

**A CHANCE SELDOM OFFERED.**—For Sale, a controlling interest in one of the best printing offices in the South. Publishes two nine column papers. In grand locality for business, and the office is new and well patronized. Employs 20 to 25 hands in the winter season. \$2,500 cash needed only or will exchange for property in the North. Sold on account of failing health of the advertiser. Address, B. C. F., care MANUFACTURERS' RECORD, Baltimore, Md.

**PARTNER WANTED** in hardwood business in the South. Owner has fine retail trade in lumber, stair work, mouldings, &c., but wishing to be relieved of care, would sell one-half interest to good party, who must be fully competent to estimate on all kinds of interior finish and able to manage 25 to 30 hands. Five to six thousand dollars and best of reference required. Stock first-class and machinery all new. Good local demand for all the work. No bonus required. For further particulars address "Hardwood," care of MANUFACTURERS' RECORD.

**TOBACCO MANUFACTORY** in the best tobacco section of Kentucky, at intersection of Memphis Branch L. & N. and O. & N. Railroads. This is a splendid point for above business. A building well adapted can be procured. Address I. C. Barclay, Russellville, Ky.

**WANTED.**—A practical foundry man, with 4,000 to 5,000 dollars, to take an interest in a machine and boiler works in a Southern city. A splendid opening for the right man. Address, Practical, care Baltimore MANUFACTURERS' RECORD.

**WANTED.**—Situation as superintendent of cotton factory. Best references given. Now engaged in the South. Address N. C., care MANUFACTURERS' RECORD, Baltimore.

**ONE** of the finest opportunities offered to party with small means who desires a half interest in an established sash, door, blind and moulding factory. The factory is now running to its fullest capacity, and orders far ahead are always on hand. Address J. B. Makepeace, Sanford, N. C.

**VALUABLE IRON PROPERTY** near Roanoke City, Va., for sale. Fully developed; title perfect; 500 acres; over one mile of iron ore. For description, analysis, samples, &c., &c., address, R. H. Logan, Salem, Va.

**2,800 ACRES** of iron lands, fully developed, conveniently located, fine furnace location, on N. & W. R. R., Va., will be sold very cheap. For price, analysis, map, &c., &c., address, L. C. Hansbrough, Salem, Va.

**WANTED.**—A partner to take interest in fruit and nursery business. Address, E. E. Forsyth, Raleigh, N. C.

**WOODEN PIPE MANUFACTURERS.**—Mr. C. G. Viele, of Salisbury, N. C., wants to correspond with some foreman or skilled workman in a wooden smoking pipe factory.

## A Safe Boiler.

A Boiler Insurance Company has published the following and sent it far and near with the apparent intention of causing the public to believe that a BABCOCK & WILCOX BOILER has exploded:

"A LOSS PAID ON A BABCOCK & WILCOX BOILER, WHICH IS CLAIMED TO BE NON-EXPLOSIVE AND ABSOLUTELY SAFE."

OFFICE OF BROOKLYN SUGAR REFINING CO., 1 BROOKLYN, N. Y., Oct. 20, 1886. American Steam Boiler Ins. Co.

GENTS: We desire to express to you our gratification and our thanks for the prompt manner in which the recent loss was adjusted upon one of our Babcock & Wilcox boilers, having received within two hours after rendering proof of loss to you the full amount of our demand for the damage to our boiler, and also the payment of the claim of Patrick Stapleton, one of our workmen, who was scalded by the escaping steam.

Yours truly, BROOKLYN SUGAR REFINING CO. J. A. Stursberg, Secretary.

It seems to be a settled policy of all Boiler Insurance Companies to discourage the use of Safety Boilers, as the fear of explosion is the greatest inducement to take out policies. But the apparent reason of publishing and sending the above notice with the following words in large type: "A loss paid on a Babcock & Wilcox boiler, which is claimed to be non explosive and absolutely safe," is evidently grudge or spite, accounted for mainly from the fact that at one time they endeavored to have the BABCOCK & WILCOX CO. treat with them for a general line of insurance on all of their manufactures, which was declined by this Company on the ground that they had no confidence either in the stability of the Company or the honesty of its management. The departure of the treasurer of said Insurance Company soon thereafter for Canada, where he has since, as far as known, remained, shows that the opinion of the BABCOCK & WILCOX CO. was not without foundation.

The following letter shows the actual facts in the case referred to:

OFFICE OF BROOKLYN SUGAR REFINING CO., 1 BROOKLYN, N. Y., Oct. 30, 1886. Messrs. The Babcock & Wilcox Co., New York:

GENTLEMEN: In reply to yours of 29th inst. would say that we sincerely regret that our letter of 20th inst. to the American Steam Boiler Insurance Company should in any way reflect upon the quality of your boilers, as we certainly did not intend to convey any such impression. Our high opinion of your boilers we believe to have demonstrated thoroughly, by the repeated orders that we have given you since 1876.

The unfortunate accident referred to was caused by the negligence of our man in charge of the boilers, who was consequently, after proper investigation, promptly discharged for allowing the water to get low. This caused several tubes to be badly burned and ruptured, which was the only damage done to property.

The injury done to Patrick Stapleton by the escaping steam was fortunately so slight that he was enabled to return to work on the second day following the accident.

We shudder to contemplate what the result would have been had we had in use any other style of boiler.

Yours truly, BROOKLYN SUGAR REFINING CO. Jno. A. Stursberg, Secretary.

Twenty years' use and upwards of 300,000 horsepower sold, without a single explosion, demonstrate that these boilers are all that is claimed for them.

**For a SAFE, ECONOMICAL and DURABLE BOILER which REQUIRES NO INSURANCE AGAINST EXPLOSION, purchase of**

**THE BABCOCK & WILCOX CO.,**

30 Cortlandt Street, New York.

107 Hope Street, Glasgow.

New York, Nov. 1, 1886.

**IRON MILL FOR SALE at a SACRIFICE.**

A RAIL MILL, completely equipped for manufacturing Rails, and well adapted to making Bar and Plate Iron and Nails, is for sale at about **One-Fifth its Cost!**

It is located on the Mississippi River near a large city, with both rail and water transportation.

Buildings, Engines and Machinery are new and of the best quality, with ample power.

Full particulars, with inventory of machinery and view of mill, by addressing

**Iron Mill,**

Care THE MANUFACTURERS' RECORD, Baltimore, Md.

**65-HORSE-POWER HORIZONTAL, STATIONARY STEAM ENGINE FOR SALE!**

Second-hand, but warranted good as new. Will be sold cheap for cash. Address, W. C. BUCHANAN, Lancaster, Pa.

**For Sale, Cheap.**

4,000 ft. 3 in. & 52 ft. 6 in. Gas Pipe. Has been used only 6 months for conducting water. Will be sold in any quantity.

Geo. H. Cornelison, Orangeburg, S. C.

BALTIMORE

## Journal of Commerce

And PRICE-CURRENT.

*A Weekly Paper,*  
Devoted to the General Commercial Interests of Baltimore and the South.

*The Manufacturers' Record Co., having purchased from the Administrators of the late Geo. U. Porter, the JOURNAL OF COMMERCE and PRICE-CURRENT, will continue its publication as a general trade journal.*

The JOURNAL OF COMMERCE had been conducted by Mr. Porter for 37 years, and was an acknowledged authority on all matters pertaining to the trade and commerce of Baltimore.

**Its Market Reports and Quotations of Prices will be edited with the utmost care, and will be complete and reliable. It will publish the most full, complete and authentic information and statistics on all matters of interest to commission and shipping merchants. It will watch closely and note accurately the condition of the markets in**

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**LUMBER, NAVAL STORES,**

**And PRODUCE in general, including Hides, Roots and Herbs, &c. It will also publish full and accurate jobbing quotations of Food Stuffs, Groceries, Dry Goods, &c. This feature of the paper will make it invaluable to**

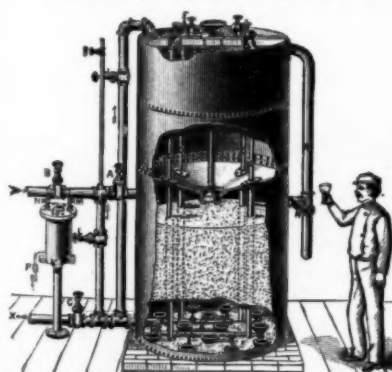
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Organic and semi-organic elements removed. **Scale and Mud Deposits in Boilers Prevented.** With hundreds of plants in operation, treating all kinds of water, our system **HAS NEVER FAILED. Promised Results Guaranteed.** Adopted by Somerville & Hartman N. J. Water Co.; City Water Co., Belleville, Ill.; Water Works, Charleston, W. Va.; Clark Thread Works, Newark, N. J.; Earl & Wilson, Troy, N. Y.; Norfolk & N. B. Hosiery Co., New Brunswick, N. J.; Victor Knitting Mills, and sixteen other knitting mills, in England, and Western Steel Works, St. Louis, Mo., and hundreds of others. **Representative Agents Wanted. For Circulars, Prices, &c., Address**

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RAILROAD TRACK TOOLS, &c.

Every Hammer or Tool having our name is fully warranted. Catalogues and discounts sent on application.



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Largest Manufacturers of Tackle Blocks in the World.

Manufacturers of the Latest Improved Self-Adjusting ROLLER BUSHED and GENUINE METALINE BUSHED  
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Improved Harcourt Patent Block.

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Improved Self-Locking Link Snatch Block.

## Vehicle Spring Co., MANUFACTURERS PAT. WAGON SPRINGS & WAGON SEAT SPRINGS, CHATTANOOGA, TENN.

Wagon  
Seat  
Spring.



The same Wagon can be used as an Express and Lumber Wagon. You can raise the end of your Wagon bed and put the Springs on or off at pleasure.

The hooks that fit the side of the Wagon bed are a part of the Spring, making the lightest, the most comfortable, and the strongest Spring on the market. These are a great improvement on the old style seat Spring.

VEHICLE SPRING CO., CHATTANOOGA, TENN., December 16, 1885.

Gentlemen: After having tried your Springs, both Bolster and Seat, we cordially endorse them as being in all respects the BEST and CHEAPEST now on the market, and heartily commend them for general use. Very respectfully, &c.,

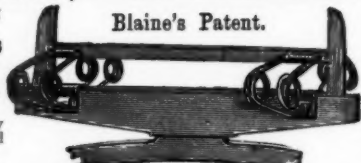
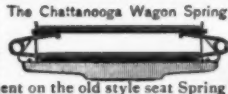
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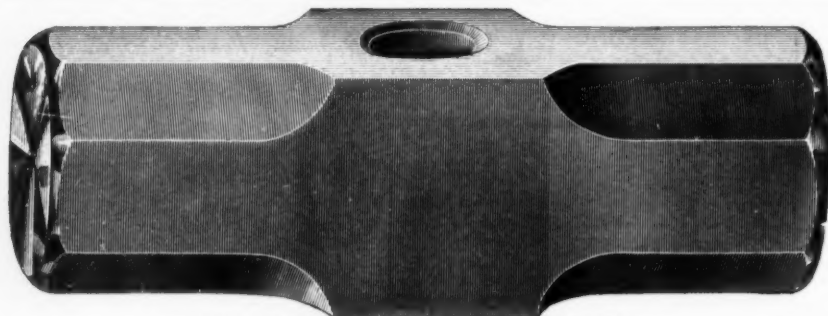
ATTENTION, DEALERS! A liberal discount to the trade.

VEHICLE SPRING CO., Chattanooga, Tenn.



Blaine's Patent.

Mention MANUFACTURERS' RECORD.



DOUBLE FACED STRIKING SLEDGE—for cutting rails.

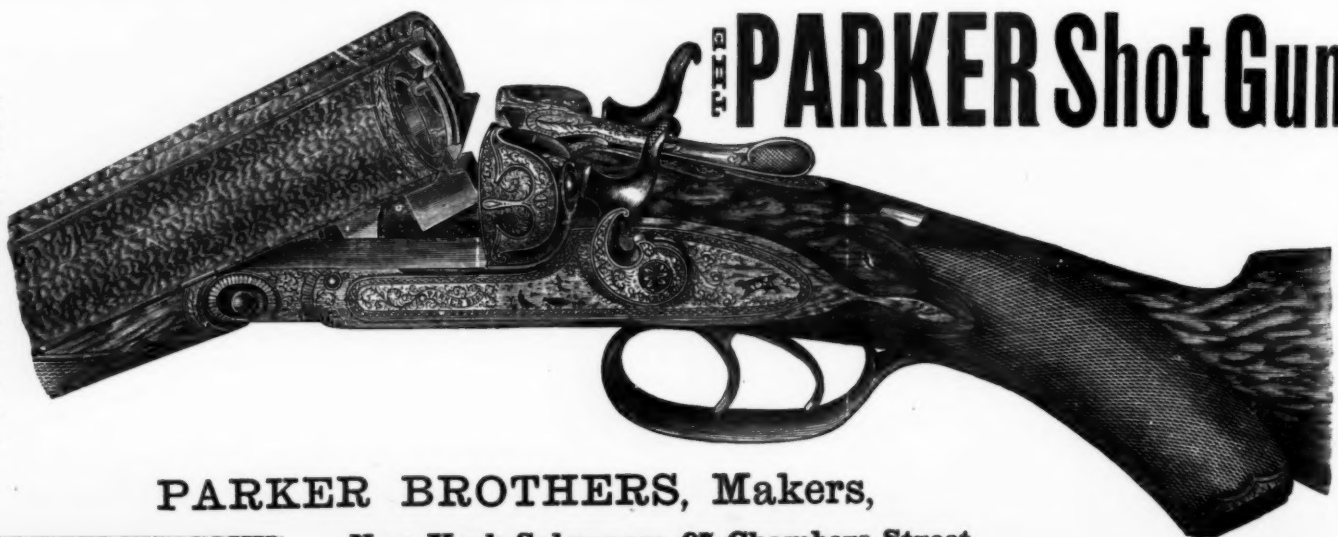
## Western Forge & Tool Works ST. LOUIS, MO., U. S. A., SOLID CAST STEEL HAMMERS, Mauls and Sledges.

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IT will pay you to correspond with us and  
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Paper. FULL LINE OF BEST GOODS AND  
LOWEST PRICES.

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Miners' **TOOLS**

Report of the International Gun Trial, held at Bergen Point, N. J., April 3, 1884. Extract from *Turf, Field and Farm* reporting the same: "The Parker Gun, our prominent home manufacture, won the admiration of all by its fine shooting qualities. It registered in both the 10 and 12-bore classes; the greatest number of pellets in the 30-inch circle, and therefore must be awarded the palm for pattern."



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ANVILS.	
Eagle and Vulcan.....	10 c. dis 20%
Wright's.....	9 1/4 c
Armstrong's Mouse Hole.....	10 1/4 c
Trenton.....	10 1/4 c
Wilkinson's.....	10 1/4 c

AUGERS AND BITS.	
Conn. Valley Mfg. Co.....	extra, 60¢ to 10¢
Douglas Mfg. Co.....	No. 1, 60¢ to 10¢
Ives.....	dis 60¢ to 10¢
Cook's Douglass Mfg. Co.....	dis 60¢ to 10¢
Grissold.....	dis 50¢ to 10¢
Patent Solid Head.....	dis 25%
Russell Jennings' Auger, Dowell, Machine.....	dis 10¢ to 10¢
Ives' "Jennings" Bits.....	dis 40¢ to 10¢
Expansive Bits, Clark's small, 1 1/8", large, 2 1/8".....	dis 25%
Expansive Bits, Ives.....	dis 33 1/3%
Expansive Bits Blake's.....	dis 40%
Hollow Augers, Ives.....	dis 25%
Hollow Augers, Douglass.....	dis 25% to 10¢
Hol. Aug., Bonney's Adjust., 1/2" to 1 1/2".....	dis 25% to 10¢
Hol. Aug., Stearns' Adjust., 1/2" to 1 1/2".....	dis 25% to 10¢
Hol. Aug., Ives' Expansive, each 1/2" to 1 1/2".....	dis 30% to 10¢
Hol. Aug., Universal Expansive, each 1/2" to 1 1/2".....	dis 20%
Wood's.....	dis 25%
Gimlet Bits.....	dis 75% gross, dis 50%
Gimlet Bits, Diamond.....	dis 1.25, dis 40%
Double Cut Gimlet Bits, Shephardson's.....	dis 40%
Double Cut Gimlet Bits, Douglass.....	dis 40%
Double Cut Gimlet Bits, Ives.....	dis 50%
Morse's Bit Stock Drill.....	dis 40¢ to 10¢
L'Hommedieu's Ship Augers.....	dis 15%

AWL HAPPS.	
Sewing Brass Ferrule.....	dis 40¢ to 10¢
Patent Sewing, Short.....	dis 40¢ to 10¢
Patent Sewing, Long.....	dis 1.20 gross, dis 40¢ to 10¢
Patent Peg, Plain Top.....	dis 40¢ to 10¢
Patent Peg, Leather Top.....	dis 40¢ to 10¢

AWLS, BRAD SETS, AC.	
Awls, Sewing, Common.....	dis 75% to 10¢
Awls, Shouldered Peg.....	dis 75% to 10¢
Awls, Patent Peg.....	dis 1.00 to 10¢
Awls, Shouldered Brad, 1/2" gross.....	dis 25% to 10¢
Awls, Handled Brad.....	dis 25% to 10¢
Brad Sets, Aiken's.....	dis 45% to 10¢
Brad Sets, No. 4, 1/2" to 1 1/2".....	dis 70%
Brad Sets, Stanley's Exc., No. 1, 1/2" to 1 1/2".....	dis 30% to 10¢
Brad Sets, Stanley's Exc., No. 2, 1/2" to 1 1/2".....	dis 30% to 10¢
Brad Sets, Stanley's Exc., No. 3, 1/2" to 1 1/2".....	dis 30% to 10¢

AXES.	
Collins & Co.....	dis 75% beveled, dis 75%
Coches Mfg. Co.....	dis 75% beveled, dis 75%
Lippincott or Mann's.....	dis 75% beveled, dis 75%
Single Bit, 1/4" to 3/4" and under.....	dis 60% net
Single Bit, 1/2" to 6" and over.....	dis 60% net
Single Bit, beveled.....	dis 60% net
Double Bit, 1/4" to 3/4" and under.....	dis 60% net
Double Bit, 1/2" to 6" and over.....	dis 60% net
Double Bit, beveled.....	dis 60% net
Second quality Axes.....	dis 50% less than above

AXLES.	
Sheldon & Co., iron.....	dis 55% off
" " steel.....	dis 55% off
AXLE GREASE—Fraser's.....	dis 60%

BALANCES.	
Spring Balances.....	dis 50%

BELLS.	
Hand, Light Brass.....	dis 75% to 10¢
Hand, White Metal.....	dis 60%
Hand, Silver Chime.....	dis 100% to 10¢
Hand, Globe (Cone's Patent).....	dis 25% to 10¢
Gong, Abbe's.....	dis 100% to 10¢
Gong, Yankee.....	dis 100% to 10¢
Gong, Barton's.....	dis 100% to 10¢
Leon Reading.....	dis 25% to 10¢
Pull, Brook's.....	dis 50% to 10¢
Crank, Taylor's.....	dis 25% to 10¢
Lever, Sargent's.....	dis 55% to 10¢
Bloomfield.....	dis 20%
Lever, R. & E. M. Co's.....	dis 45% to 10¢
Call.....	dis 25%
Cow, Common Wrought.....	dis 55% to 10¢
Cow, Western, Sargent's List.....	dis 55% to 10¢
Cow, Kentucky, Sargent's List.....	dis 55% to 10¢
Cow, Moore's or Dodge's, Genuine Ky., new list.....	dis 55% to 10¢
Nos. 1, 2, 3, 4, 5, 6 Hog 1/2" dis 70%	
1 1/2" 2 1/2" 3 1/2" 4 1/2" 5 1/2" 6 1/2" dis 70%	
Cow, Texas "Star".....	dis 40%

BELLGOWS.	
Blacksmith's Common.....	dis 50% to 10¢
Molder's.....	dis 25%
Hand Bellows.....	dis 25%

BLIND FASTENERS.	
Francis.....	dis 20%
Mackrell's.....	dis 20% pairs \$1.00, dis 10%
Van Sand's Screw Pattern.....	dis 25% gross, net
Van Sand's Old Pattern.....	dis 1 1/4, 1 1/2, 1 3/4, 2, 2 1/2, 3, 4, 5, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72, 74, 76, 78, 80, 82, 84, 86, 88, 90, 92, 94, 96, 98, 100, 102, 104, 106, 108, 110, 112, 114, 116, 118, 120, 122, 124, 126, 128, 130, 132, 134, 136, 138, 140, 142, 144, 146, 148, 150, 152, 154, 156, 158, 160, 162, 164, 166, 168, 170, 172, 174, 176, 178, 180, 182, 184, 186, 188, 190, 192, 194, 196, 198, 200, 202, 204, 206, 208, 210, 212, 214, 216, 218, 220, 222, 224, 226, 228, 230, 232, 234, 236, 238, 240, 242, 244, 246, 248, 250, 252, 254, 256, 258, 260, 262, 264, 266, 268, 270, 272, 274, 276, 278, 280, 282, 284, 286, 288, 290, 292, 294, 296, 298, 300, 302, 304, 306, 308, 310, 312, 314, 316, 318, 320, 322, 324, 326, 328, 330, 332, 334, 336, 338, 340, 342, 344, 346, 348, 350, 352, 354, 356, 358, 360, 362, 364, 366, 368, 370, 372, 374, 376, 378, 380, 382, 384, 386, 388, 390, 392, 394, 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2822, 2824, 2826, 2828, 2830, 2832, 2834, 2836, 2838, 2840, 2842, 2844, 2846, 2848, 2850, 2852, 2854, 2856, 2858, 2860, 2862, 2864, 2866, 2868, 2870, 2872, 2874, 2876, 2878, 2880, 2882, 2884, 2886, 2888, 2890, 2892, 2894, 2896, 2898, 2900, 2902, 2904, 2906, 2908, 2910, 2912, 2914, 2916, 2918, 2920, 2922, 2924, 2926, 2928, 2930, 2932, 2934, 2936, 2938, 2940, 2942, 2944, 2946, 2948, 2950, 2952, 2954, 2956, 2958, 2960, 2962, 2964, 2966, 2968, 2970, 2972, 2974, 2976, 2978, 2980, 2982, 2984, 2986, 2988, 2990, 2992, 2994, 2996, 2998, 3000, 3002, 3004, 3006, 3008, 3010, 3012, 3014, 3016, 3018, 3020, 3022, 3024, 3026, 3028, 3030, 3032, 3034, 3036, 3038, 3040, 3042, 3044, 3046, 3048, 3050, 3052, 3054



Warner & Nole's.....	dis 5
Kip's or Selsor's.....	dis 30
Yerkes & Plumb.....	dis 15
Buffalo Hammer Co.—	
Sledges.....	dis 35
Mason and Spalling Hammers, &c.....	dis 60
HANDLES.—Door or Thumb Latches.	
Nos.     o     1     2     3     4	
Per doz., \$o.80 1.00 1.18 1.35 1.50.....	dis 55
Roggin's Latches.....	per doz 35c.
Bronze Iron Drop Latches.....	per doz 90c.
Jap'd Store Door Handles—Nuts, \$1.25; Plate.....	
do note, \$1.10.....	per doz 10
Barn Door.....	per doz \$1.60
Wrought Chest.....	dis 65
Surface Chest.....	dis 55
Flush Chest.....	dis 55
Lifting.....	dis 50
Saw and Plane.....	dis 40
Lippincott Cross-Cut Saw.....	2oc. per pair
Hammer and Hatchet.....	dis 20
Brad Axl.....	gross, \$3.00, dis 20
Chisel, all kinds.....	dis 30
Auger, assorted, gross.....	per doz 45c.
Auger, large, gross.....	5.00
Patent Auger, "des".....	dis 25
Patent Auger, Douglas'.....	set \$1.25
Patent Auger, Swan's.....	set 1.00
HAMMOCK CHAIRS.	
White Mountain, per doz.....	\$36.
"    Finished in red, per doz.....	\$42.0
HANGERS.	
Cronk Hanger Co.—	
No. 4, per doz. pair.....	\$12.00, 50
" 5, " " ".....	14.40, 50
" 6, " " ".....	18.00, 50
Iron clad track.....	8 cents per foot, 50
Barn door stays.....	\$3.00 per doz., 50
Barn Door, old patterns.....	dis 60
Barn Door, New England.....	dis 60
Climax (Anti-Friction).....	dis 30
Warner's.....	dis 20
Richard's.....	dis 20
HATCHETS.	
Underhill's.....	35
Haines' Solid Steel.....	per doz \$7.25 \$8.00 \$8.75
Shingling, Nos. 1 2 3.....	per doz 7.50 8.50 9.25
Claw, Nos. 1 2 3.....	per doz 7.50 8.00 8.50
Lathing, Nos. 1 2 3.....	per doz 7.50 8.00 8.50
Hammond's new list.....	dis 45
Blood's.....	dis 35
Hunt's.....	dis 30
Russell's, low list.....	dis 40
Coboes Bench Broad Adzes.....	40
HAY KNIVES.	
Gem.....	per doz \$13.50
"Lightning".....	per doz \$30.00 net 5
Wadsworth's.....	dis 30
Plate Hinges {8, 10, 12 in.....} 35c. per lb.	
"Providence" } over 12.....} 45c. per lb.	
Screw Hook {8, 10, 12 in.....} 25c. per lb.	
And Strap, {14 to 36 in.....} 25c. per lb.	
Crown spring hinges, for screen doors, dis 60; for solid doors, single action, dis 45; for solid doors, double action, dis 55.	
Crown Screen Door Latch.....	gross \$12, dis 5
Crown Christmas-Tree Holders, 2-inch, per doz 30; 3-inch, \$12.....	dis 45
Dickford Portable Pump.....	each \$6, dis 20
American Cake Mixer, No. 6.....	each \$3.50, dis 20
American Tobacco Cutter.....	per doz \$15, dis 30
A. M. Co. Clothes Wringer, No. 2 roll, 10x1½, \$48.....	dis 20
Heavy Welded Hook {8 to 12 in.....} \$100 lb. }	
{14 in. & up, \$600 lb.....} 20	
New Hook and Eye.....	3½ in..... 9c. } dis
{4 in..... 10c. } 20	
{5 in..... 12c. }	
Wrought Strap & T list, Dec. 30, '77.....	dis 65
HORS.	
Planters.....	per doz \$5.00, dis 60
Pivoted Shank.....	per doz \$5.00, dis 60
Drub.....	dis 50
Glenn's Pat. Solid C. S. Scovill Pattern.....	dis 60
Falk's Pat. Solid C. S. Scovill Pattern.....	dis 60
Lubbard, Bakewell & Co.....	dis 60
HORSE NAILS.	
Usable; Nos. 5 6 7 8 9 10.....	dis 20
Plain.....	per keg 25c.
Finish'd.....	per keg 25c.
Fin'n'd, P'n.....	per keg 25c.
Fin'n'd, Fin'd.....	per keg 25c.
Ass't.....	per keg 25c.
Utman.....	per keg 25c.
Ararac.....	per keg 25c.
Tobe.....	per keg 25c.
Whelpain.....	per keg 25c.
Forged.....	per keg 25c.
C.....	per keg 25c.
B.....	per keg 25c.
Edgewater.....	per keg 25c.
Even Haven.....	per keg 25c.
Apewell.....	per keg 25c.
HORSE SHOES.	
Gurden.....	per keg \$3.85
I. Horse Shoe Co., Perkin's Improved, Light, Medium and Heavy.....	per keg \$3.85
Falker's—Forged: (Light, Medium and Heavy).....	per keg \$3.85
Horse.....	per keg \$3.85
Mule.....	per keg \$4.75
Ryden Forge'd Heel & Toe Horse Shoes.....	per keg \$4.75
"    " Plain " " ".....	\$4.75
"    " Frog " " ".....	\$5.00
"    " Heel & Toe Mule " " ".....	\$5.75
Ryden Steel Mule Shoes.....	per keg \$5.75
diamond State Horse Shoes.....	per keg \$3.85
diamond State Mule Shoes.....	per keg \$4.85
Henix Light, Medium and Heavy Horse Shoes.....	per keg \$3.85
Henix Mule Shoes.....	per keg \$4.85
Cn Shoes—Mt. Carmel Ox Shoes.....	20 cts. per lb.
ICE CREAM FREEZERS.	
Peerless—3 quart, \$4.50; 4 quart, \$5.50; 6 quart, \$7.00; 8 quart, \$8.00; 10 quart, \$12. The Gooch Patent "Giant"—14 quart, \$20; 18 quart, \$25; 22 quart, \$30; 25 quart, \$35; 3 quart, \$40; 42 quart, \$45. Discount 50%.	
American—2 quart, \$4.75; 3 quart, \$5.25; 4 quart, \$5.75; 6 quart, \$5 each.....	dis 45
rown, single action, 2 quart, \$3.75; 3 quart, \$4.50; 4 quart, \$5.10; 6 quart, \$7; 8 quart, \$8.....	dis 45
rown, double action, with crank, 8 quart, \$6.50; 10 quart, \$12; 14 quart, \$16.50; 18 quart, \$21; 24 quart, \$25. With fly wheel, 8 quart, \$13; 10 quart, \$16; 14 quart, \$20; 18 quart, \$25; 24 quart, \$30; 30 quart \$37.50.....	dis 45
rown, double action, 2 quart, \$3.75; 3 quart, \$4.50; 4 quart, \$5.50; 6 quart, \$7; 8 quart, \$8.....	dis 45
rown, double action, 2 quart, \$3.75; 3 quart, \$4.50; 4 quart, \$5.50; 6 quart, \$7; 8 quart, \$8.....	dis 55
rown Ice Chopper.....	per doz \$7.50, dis 35
KNOWS.	
Marriage, (Jap'd &c &c gross).....	dis 60
Case—Common.....	dis 30
Emaciate Door Knobs.....	new list, dis 35



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# Gin & Machine Co.

MEMPHIS, TENN., U. S. A.

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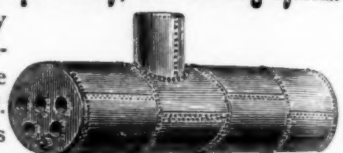
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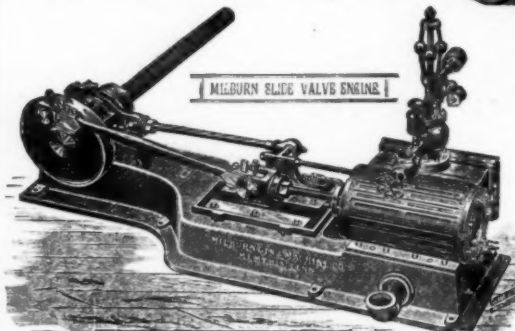
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1873

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SPINNING AND TWISTER RINGS

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- ☞ It will restore steel when burned.
- ☞ It both welds and refines at the same time.
- ☞ It never misses welding **when heated hot enough.**
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Any tool cracked in tempering can be welded by one application, and I positively guarantee that steel will not crack after it has been worked in the compound. Testimonials of its efficacy in hand from practical machinists in New York, Pittsburgh, Newark and other cities. **Sold in bulk at 5 cents a pound.** Address

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**SHREAVES.**  
Sliding Door, M. W. & Co., List.....dis 45¢  
Sliding Door, R. & E. list.....dis 60¢  
Sliding Door, Patent Roller.....dis 60¢  
Sliding Door, Pt. Roller, Hatfield's.....dis 60¢  
Sliding Door, Russell's Anti-Friction.....dis 60¢  
Also see Hangers.

**SHOVELS AND SPADERS.**  
Ames, New List, July 1, 1888.....dis 15¢  
Griffiths.....dis 60¢  
Remington's (Lowman's Patent).....dis 60¢  
Rowland's.....dis 60¢  
Kimball's.....dis 35¢  
Lippincott, new list.....dis 20¢  
Humy, Bina & Co.....dis 15¢

**SPOKE TRIMMERS.**  
Bonney's.....dis 10¢  
Stearns.....dis 10¢  
Ives'.....dis 10¢  
Douglas.....dis 15¢

**SILVER PLATED WARE.**  
Wm. Rogers Manf. Co.....dis 50¢  
Holmes, Booth & Hayden.....dis 40¢  
Brown Bros.....dis 40¢  
Wallace's Steel Silver Plated.....dis 35¢  
Rogers Bros 1847.....dis 40¢  
C. Rogers & Wm. Rogers.....dis 40¢

**SILVER PLATED HOLLOW WARE.**  
Wm. Rogers Manf. Co.....dis 40¢  
Meriden Britannia Co.....dis 35¢

**SOLDERING IRONS AND COPPERS.**  
Covert's Soldering Irons.....dis 35¢  
Covert's Adjustable Coppers.....dis 35¢

**SPOONS.**  
Britannia.....dis 60¢  
Tinned, Iron, Table and Tea.....dis 65¢  
Tinned Iron Basting.....dis 65¢  
German Silver.....dis 40¢

**STONE.**  
Hindustan No. 1, 5c; Aze, 8c.....net  
Sand Stone.....dis 60¢  
Washita Stone.....dis 60¢  
Washita Stone, Slips.....dis 45¢  
Arkansas.....dis 50¢

**SQUARES.**  
Steel.....dis 60¢  
Iron.....dis 60¢  
Nickel Plated.....dis 60¢  
Try Square and T Bevels.....dis 40¢  
Diston's Try Square and T Bevels.....dis 40¢

**TACKS, BRADS, & C.**  
[Less 10¢ for cash if paid by 6th of month following sale.]

American Iron Carpet Tacks, all kinds.....65¢  
Steel Carpet Tacks, all kinds.....60¢  
Swedes Iron Carpet Tacks, all kinds.....60¢  
Swedes Iron Upholsterers' Tacks.....60¢  
Tinned Swedes Iron Upholsterers' Tacks.....60¢  
American Iron Cut Tacks.....55¢  
Gimp and Lace Tacks.....50¢  
Tinned Gimp and Lace Tacks.....50¢  
Copper Tacks.....50¢  
Copper Finishing and Trunk Nails.....50¢  
Cigar Box Nails.....50¢  
Finishing Nails.....50¢  
Trunk and Clout Nails.....50¢  
Tinned Trunk and Clout Nails.....50¢  
Basket Nails.....50¢  
Chair Nailers' Points.....45¢  
Common and Patent Brads.....45¢  
Hungarian Nails and Miners' Tacks.....45¢  
Tinned Capped Trunk Nails.....30¢  
Looking Glass Tacks.....25¢  
Picture Frame Points.....25¢  
Leathered Carpet Tacks.....25¢  
Brush Tacks.....25¢

**TAP BORERS.**  
Common and Ring.....dis 20¢  
Ives' Tap Borers.....dis 15¢  
Enterprise Mfg. Co.....dis 25¢

**TOBACCO CUTTERS.**  
Enterprise Mfg. Co (Champion).....dis 25¢  
Wood Bottom.....dis 25¢  
All Iron.....dis 25¢  
Wilson's.....dis 25¢

**THERMOMETERS.**  
Tin Case.....dis 75¢  
Storm Glasses.....dis 35¢

**TOM CALKS.**  
Winsted.....dis 5¢

**TRAPS.**  
Game, Newhouse.....dis 35¢  
Game, Oneida Pattern.....dis 60¢  
Game, Blake's Patent.....dis 40¢  
Mouse, Wood, Choker.....dis 10¢  
Mouse, Round Wire.....dis 10¢  
Mouse, Catch-em-alive.....dis 10¢  
Cyclon Mouse.....dis 10¢  
Boss.....dis 10¢  
Rat, "Decoy".....dis 10¢  
Delusion Mouse, per doz.....dis 10¢

**TROWELS.**  
Lothrop's Brick and Plastering.....dis 25¢  
Reed's Brick and Plastering.....dis 25¢  
Diston's Brick and Plastering.....dis 25¢  
Clement & Maynard's.....dis 20¢  
Worral's Brick.....dis 20¢  
Brades & Walby's.....dis 20¢  
Garden.....dis 25¢

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Handy Truck.....dis 35¢  
Penfield Block Co's list, 1888.....dis 35¢  
Peerless, with Cogs, No. 3.....dis 35¢  
Peerless, with Cogs, No. 4.....dis 35¢  
Eureka, No. 2.....dis 40¢

**VISES.**  
Cheney's Combined Vise and Anvil.....dis 30¢  
Solid Box.....dis 30¢  
Trenton.....dis 45¢  
Iron City Tool Works.....dis 50¢  
Manner Drill Mfg. Co's.....dis 50¢  
Machinist's Vise.....dis 50¢  
Bench-Wilson's.....dis 45¢  
Trenton.....dis 25¢  
Parker's.....dis 20¢  
Prentiss.....dis 25¢  
Bonney's.....dis 35¢  
Well Wheels.....dis 60¢  
Stephen's Patent Vises.....dis 60¢

**WIRE.**  
Brass and Copper, list of Jan. 17, 1884.....dis 30¢  
Bright and Annealed.....dis 30¢  
Bright and Annealed.....dis 30¢  
Bright and Annealed.....dis 30¢  
Coppered.....dis 30¢  
Galvanized, Nos. 0 to 18.....dis 40¢  
Tinned, Nos. 0 to 18.....dis 60¢  
Tinned Broom Wire, Nos. 18 to 25.....dis 60¢  
Annealed Fence, Nos. 8 & 9.....dis 55¢  
Annealed Galve, Nos. 10 to 14.....dis 50¢  
Fence Staples, Galvanized.....dis 50¢  
Japanese Barb Fence.....dis 40¢  
Galvanized Barb Fence.....dis 40¢  
Buck Thorn Galvanized.....dis 50¢  
Picture Wire.....dis 60¢  
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Salem Standard Penny Nails.....\$3 50 per Box.

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Baxter's Adjustable "S" list Jan. 1880.....dis 20¢  
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Coes' Genuine.....dis 60¢  
Coes' "Mechanics".....dis 60¢  
Coes' Pattern, Malleable.....dis 75¢  
Coes' Pattern, Wrought.....dis 60¢  
Girard Standard.....dis 50¢  
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Always Ready.....dis 25¢

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Universal, XX, No. 2 1/2.....30.00  
Universal, XX, No. 2 1/2.....30.00  
Universal, XX, No. 1 1/2.....45.00  
Universal, XX, No. 1.....60.00  
Universal, XX, No. 8.....10.75  
Universal, XX, No. 12.....20.25  
Universal, XX, No. 18.....22.75  
Universal, XX, No. 24.....30.25  
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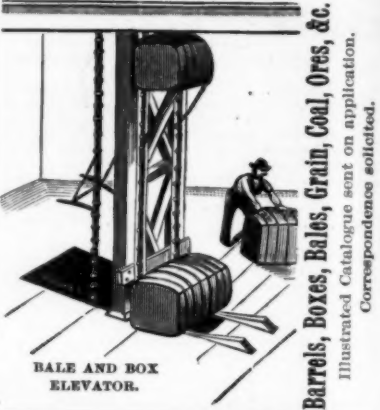
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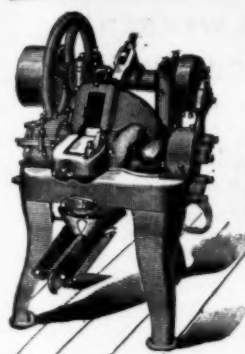
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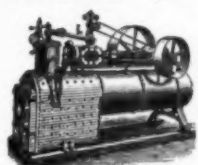
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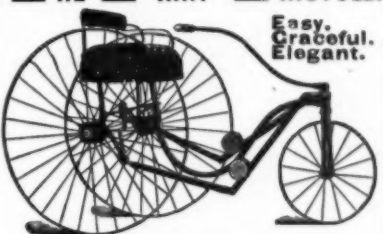
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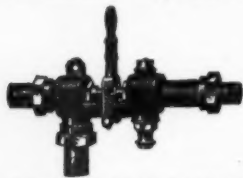
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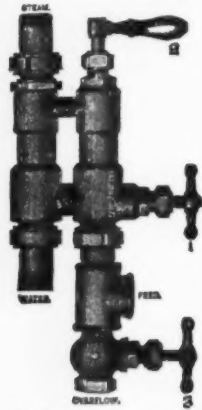
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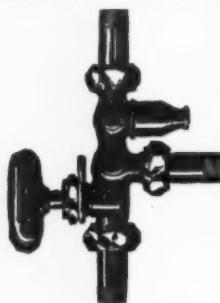
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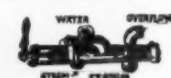
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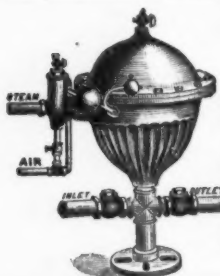
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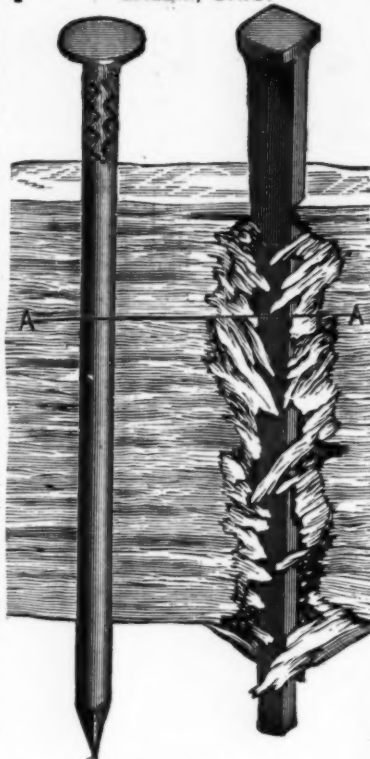
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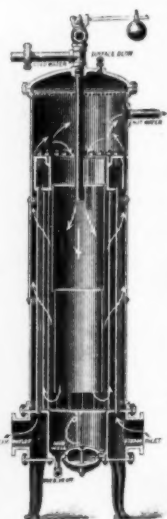
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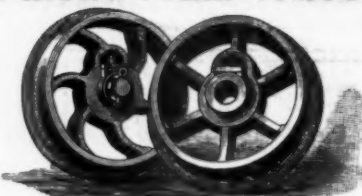
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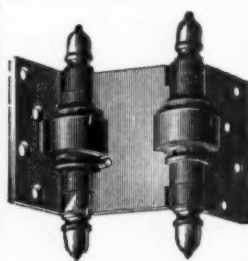


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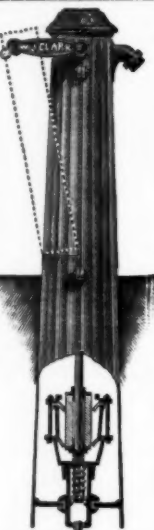
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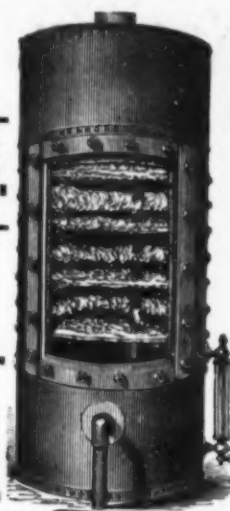
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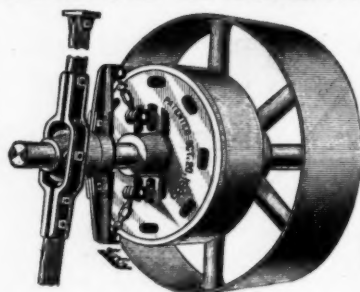
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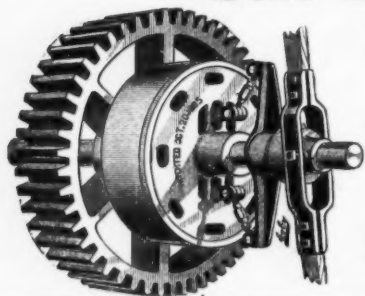
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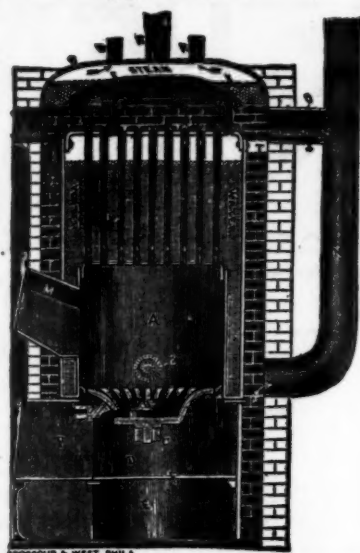
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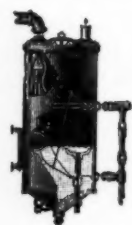
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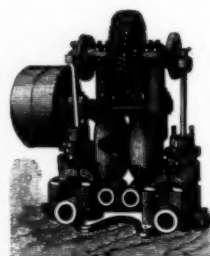
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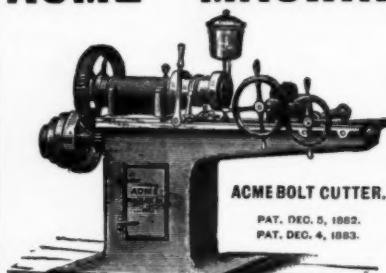
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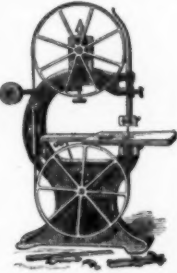
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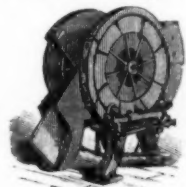
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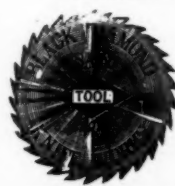


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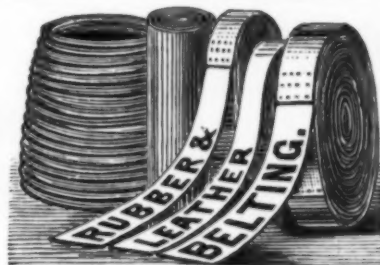
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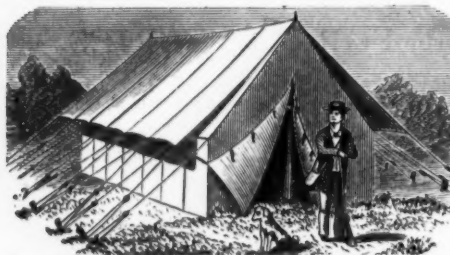
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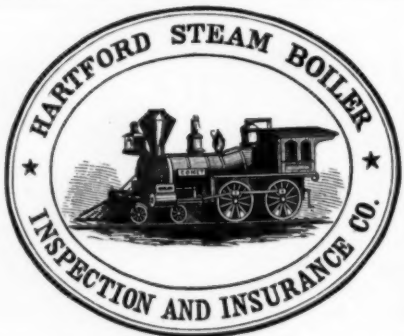
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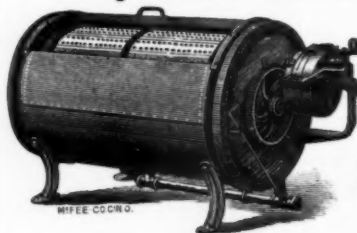
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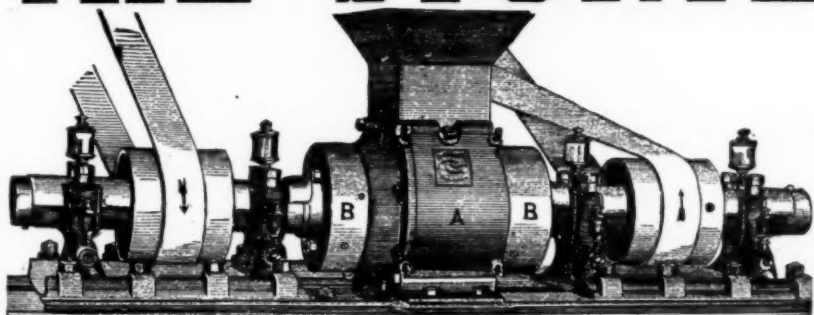
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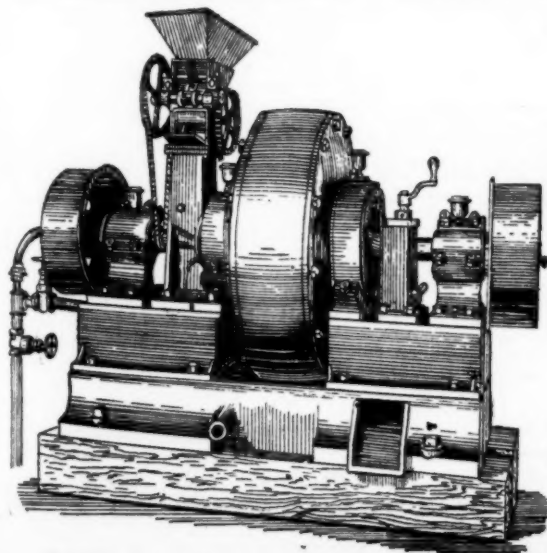
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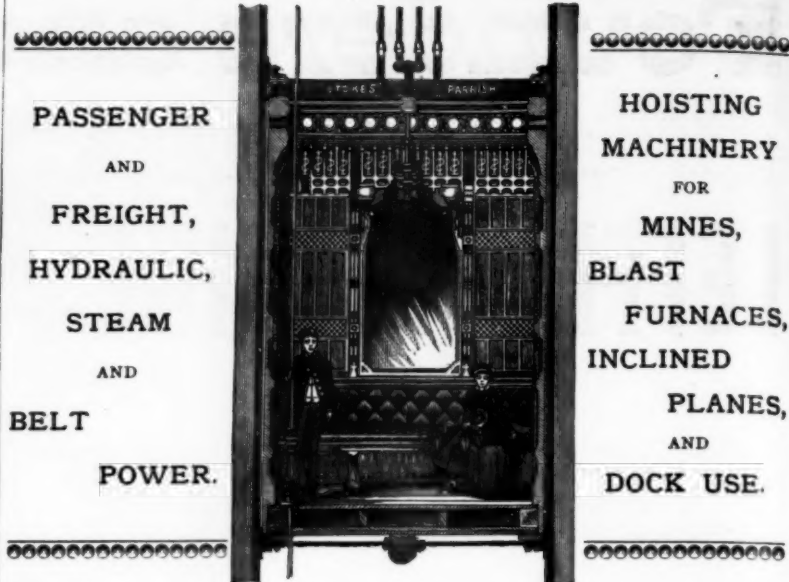
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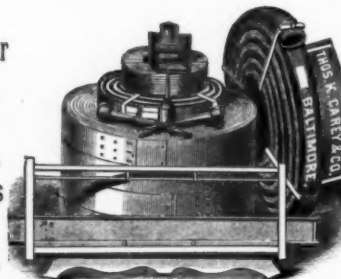
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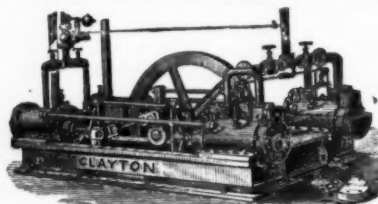
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